

Chemical Analysis Report

NW-DIST-2020-08-11-01

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

Event Description: **Pensacola Cantonment Run**
Request ID: **RQ-2020-08-10-41**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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160 Government Center
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Pensacola, FL 32502-5794
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Certified by: Colin Wright, Program Administrator

Date Certified: 02-SEP-2020 10:27



NON-CONFORMANCE REPORT INCLUDED

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: Jackson Creek upstream of Prieto Drive

Collection Date/Time: 08/10/2020 10:10

Field ID: G4NW0505

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189486	EPA 8276	Chlordane	7.0	I	ng/L	P385982	
		Toxaphene	37	U	ng/L	P385982	
2189568	EPA 8321B	2,4-D	0.0095		ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	5.4		ug/L	P385904	
		Sucralose**	0.91		ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	30		ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	0.0012	I	ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	0.015		ug/L	P386033	
		Clothianidin**	0.0020	U	ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0025	I	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.010	I	ug/L	P386033	
		Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.083		ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCPP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.0020	U	ug/L	P386033	
		Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Jackson Creek downstream of Old Corry Rd. Collection Date/Time: 08/10/2020 10:37

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189466	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P386273	
		Sulfate	11		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	11		PCU	P385923	
	SM 2320 B-2011	Total Alkalinity	47		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	106		mg/L	P386182	
	SM 2540 D-2011	TSS	2	I	mg/L	P386223	
	SM 4500 F-C-2011	Fluoride	0.048	I	mg F/L	P385993	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.049	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33	Y	mg N/L	P386141	
2189467	EPA 353.2 Rev. 2.0	NO2NO3-N	1.5		mg N/L	P385938	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P385942	
	SM 5310 B-2011	Organic Carbon	2.2		mg C/L	P385980	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.007	I	mg P/L	P385919	
	dissolved						
2189478	EPA 8321B	Aldicarb	0.020	U	ug/L	P385828	
		Aldicarb Sulfone	0.0020	U	ug/L	P385828	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P385828	
		Carbaryl	0.0020	U	ug/L	P385828	
		Carbofuran	0.0020	U	ug/L	P385828	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P385828	
		Methiocarb	0.0020	U	ug/L	P385828	
		Methomyl	0.0020	U	ug/L	P385828	
		Oxamyl	0.0020	U	ug/L	P385828	
		Propoxur	0.0020	U	ug/L	P385828	
		2,4-D	0.0022	I	ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	4.1		ug/L	P385904	
		Sucralose**	1.6		ug/L	P385904	
2189479		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothal**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	16		ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	8.0E-04	U	ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	0.022		ug/L	P386033	
		Clothianidin**	0.0020	U	ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0020	U	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.0041	I	ug/L	P386033	

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189479	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.065		ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0054	I	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.0020	U	ug/L	P386033	
		Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	
2189484	EPA 8270E	Aldrin	4.4	U	ng/L	P385982	
		Alpha-BHC	2.2	U	ng/L	P385982	
		Alpha-Chlordane	1.7	I	ng/L	P385982	
		Beta-BHC	8.8	U	ng/L	P385982	
		Beta-Cyfluthrin**	16	U	ng/L	P385982	
		Bifenthrin**	4.4	U	ng/L	P385982	
		Delta-BHC	8.8	U	ng/L	P385982	
		Gamma-BHC	8.8	U	ng/L	P385982	
		Chlorothalonil	2.2	U	ng/L	P385982	
		Cis-Nonachlor**	1.1	U	ng/L	P385982	
		Cypermethrin	22	U	ng/L	P385982	
		Dacthal**	1.1	UJ	ng/L	P385982	LCS
		DDD-p,p'	5.5	U	ng/L	P385982	
		DDE-p,p'	5.5	U	ng/L	P385982	
		DDT-p,p'	6.6	U	ng/L	P385982	
		Deltamethrin**	22	U	ng/L	P385982	
		Dicofol	33	UJ	ng/L	P385982	LCS
		Dieldrin	27		ng/L	P385982	
		Endosulfan I	4.4	U	ng/L	P385982	
		Endosulfan II	4.4	U	ng/L	P385982	
		Endosulfan Sulfate	2.2	U	ng/L	P385982	
		Endrin	2.2	U	ng/L	P385982	
		Endrin Aldehyde	2.2	U	ng/L	P385982	
		Endrin Ketone	2.2	U	ng/L	P385982	
		Ethalfuralin**	3.3	U	ng/L	P385982	
		Gamma-Chlordane	1.1	U	ng/L	P385982	
		Heptachlor	1.6	U	ng/L	P385982	
		Heptachlor Epoxide	11		ng/L	P385982	
		Hexachlorobenzene	2.2	U	ng/L	P385982	
		Lambda-Cyhalothrin**	16	U	ng/L	P385982	
		Methoxychlor	4.4	U	ng/L	P385982	
		Mirex	2.2	U	ng/L	P385982	
		Permethrin	11	U	ng/L	P385982	

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189484	EPA 8270E	Phenothrin**	33	U	ng/L	P385982	
		Prallethrin**	27	U	ng/L	P385982	
		Trans-Nonachlor**	1.1	U	ng/L	P385982	
		Trifluralin	2.7	U	ng/L	P385982	
		Chlordane	15	I	ng/L	P385982	
2189485	EPA 8270E	Toxaphene	33	U	ng/L	P385982	
		Acetochlor	0.27	U	ng/L	P386047	
		Alachlor	0.27	U	ng/L	P386047	
		Ametryn	0.64	U	ng/L	P386047	
		Atrazine	20		ng/L	P386047	
		Atrazine Desethyl	12		ng/L	P386047	
		Azinphos Methyl	2.1	U	ng/L	P386047	
		Bromacil	13		ng/L	P386047	
		Butylate	0.43	U	ng/L	P386047	
		Carbophenothion	0.53	U	ng/L	P386047	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P386047	
		Chlorpyrifos Methyl	0.053	U	ng/L	P386047	
		Cyanazine	3.5	UJ	ng/L	P386047	RPD
		Demeton	1.6	U	ng/L	P386047	
		Diazinon	0.13	U	ng/L	P386047	
		Dimethenamid**	0.11	U	ng/L	P386047	
		Disulfoton	0.53	U	ng/L	P386047	
		Dithiopyr**	0.11	I	ng/L	P386047	
		EPTC	1.3	U	ng/L	P386047	
		Ethion	0.16	U	ng/L	P386047	
		Ethoprop	0.11	U	ng/L	P386047	
		Fenamiphos	0.53	U	ng/L	P386047	
		Fipronil	4.7		ng/L	P386047	
		Fipronil Desulfinyl**	0.25	I	ng/L	P386047	
		Fipronil Sulfide	1.6		ng/L	P386047	
		Fipronil Sulfone	16		ng/L	P386047	
		Flumioxazin**	1.9	U	ng/L	P386047	MS
		Fonofos	0.21	U	ng/L	P386047	
		Hexazinone	0.53	U	ng/L	P386047	
		Imazalil**	0.80	U	ng/L	P386047	
		Malathion	0.37	U	ng/L	P386047	
		Metalaxyl	0.80	U	ng/L	P386047	
		Metolachlor	0.53	U	ng/L	P386047	
		Metribuzin	3.5	U	ng/L	P386047	
		Mevinphos	0.53	U	ng/L	P386047	
		Molinate	0.32	UJ	ng/L	P386047	RPD
		Naled**	1.6	U	ng/L	P386047	
		Norflurazon	0.53	U	ng/L	P386047	
		Oxadiazon	0.24	I	ng/L	P386047	
		Parathion Ethyl	0.27	U	ng/L	P386047	

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189485	EPA 8270E	Parathion Methyl	0.59	U	ng/L	P386047	
		Pendimethalin	1.1	U	ng/L	P386047	
		Phorate	0.27	U	ng/L	P386047	
		Prodiamine**	0.19	U	ng/L	P386047	
		Prometon	3.3	I	ng/L	P386047	
		Prometryn	0.21	U	ng/L	P386047	
		Pronamide**	0.16	U	ng/L	P386047	
		Propiconazole**	0.53	U	ng/L	P386047	
		Simazine	0.60	I	ng/L	P386047	
		Sulfentrazone**	0.82	I	ng/L	P386047	
		Tebuconazole**	0.53	UJ	ng/L	P386047	RPD
		Terbufos	0.11	U	ng/L	P386047	
		Terbutylazine	0.45	U	ng/L	P386047	
2189492	EPA 200.7 Rev. 4.4	Barium	42.0		ug/L	P385910	
		Calcium	19.6		mg/L	P385910	
		Iron	500		ug/L	P385910	
		Magnesium	3.55		mg/L	P385910	
		Potassium	2.3		mg/L	P385910	
		Sodium	9.1		mg/L	P385910	
		Zinc	12	I	ug/L	P385910	
	EPA 200.8 Rev. 5.4	Aluminum	37		ug/L	P385910	
		Antimony	0.17	I	ug/L	P385910	
		Arsenic	0.38		ug/L	P385910	
		Beryllium	0.010	I	ug/L	P385910	
		Boron**	47.1		ug/L	P385910	
		Cadmium	0.038	I	ug/L	P385910	
		Chromium	0.40	U	ug/L	P385910	
		Cobalt	0.512		ug/L	P385910	
		Copper	1.60		ug/L	P385910	
		Lead	0.46		ug/L	P385910	
		Manganese	87.6		ug/L	P385910	
		Molybdenum	0.19	I	ug/L	P385910	
		Nickel	0.66	I	ug/L	P385910	
		Selenium	0.52	I	ug/L	P385910	
		Silver	0.010	U	ug/L	P385910	
		Thallium	0.10	U	ug/L	P385910	
	SM 2340B	Hardness	63.5		mg/L	P385910	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

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

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Bayou Marcus Creek upstream of Patricia Drive Collection Date/Time: 08/10/2020 11:11

Field ID: G5NW0155

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189463	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P385911	
	EPA 300.0 Rev. 2.1	Chloride	7.8		mg Cl/L	P386273	
		Sulfate	2.9		mg SO4/L	P386277	
	SM 2120 B-2011	Color (true)	45		PCU	P385922	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P385989	
	SM 2540 C-2011	TDS	55		mg/L	P386182	
	SM 2540 D-2011	TSS	2	I	mg/L	P386223	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385993	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.020	Y	mg N/L	P386085	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	Y	mg N/L	P386141	
2189464	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P385938	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P385942	
	SM 5310 B-2011	Organic Carbon	3.8		mg C/L	P385980	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.005	I	mg P/L	P385919	
	dissolved						
2189465	EPA 8321B	Aldicarb	0.020	U	ug/L	P385828	
		Aldicarb Sulfone	0.0020	U	ug/L	P385828	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P385828	
		Carbaryl	0.0020	U	ug/L	P385828	
		Carbofuran	0.0020	U	ug/L	P385828	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P385828	
		Methiocarb	0.0020	U	ug/L	P385828	
		Methomyl	0.0020	U	ug/L	P385828	
		Oxamyl	0.0020	U	ug/L	P385828	
		Propoxur	0.0020	U	ug/L	P385828	
2189477		2,4-D	0.070		ug/L	P386033	
		Acesulfame K**	0.10	U	ug/L	P385904	
		AMPA**	0.10	U	ug/L	P385904	
		Sucralose**	0.25		ug/L	P385904	
		Acetaminophen**	0.0080	U	ug/L	P386033	
		Acetamiprid**	0.0020	U	ug/L	P386033	
		Endothall**	0.25	U	ug/L	P385904	
		Glufosinate**	0.10	U	ug/L	P385904	
		Glyphosate**	0.10	U	ug/L	P385904	
		Afidopyropen**	0.0020	U	ug/L	P386033	
		Bentazon	0.0040		ug/L	P386033	
		Benzovindiflupyr**	0.0020	U	ug/L	P386033	
		Carbamazepine**	8.0E-04	U	ug/L	P386033	
		Clothianidin**	0.0020	U	ug/L	P386033	
		Dinotefuran**	0.0020	U	ug/L	P386033	
		Diuron	0.0020	U	ug/L	P386033	
		Fenuron	0.016	U	ug/L	P386033	
		Fluridone**	8.0E-04	U	ug/L	P386033	
		Imazapyr**	0.0086	I	ug/L	P386033	

Field ID: G5NW0155

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189477	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P386033	
		Ibuprofen**	0.020	U	ug/L	P386033	
		Imidacloprid	0.015		ug/L	P386033	
		Linuron	0.0040	U	ug/L	P386033	
		Mandestrobin**	0.0020	U	ug/L	P386033	
		MCP	0.0020	U	ug/L	P386033	
		Naproxen**	0.0080	U	ug/L	P386033	
		Primidone**	0.0040	U	ug/L	P386033	
		Pyraclostrobin**	0.0020	U	ug/L	P386033	
		Thiamethoxam**	0.0020	U	ug/L	P386033	
		Tolfenpyrad**	0.0020	U	ug/L	P386033	
		Triclopyr**	0.0040	U	ug/L	P386033	
2189482	EPA 8270E	Aldrin	4.6	U	ng/L	P385982	
		Alpha-BHC	2.3	U	ng/L	P385982	
		Alpha-Chlordane	1.1	U	ng/L	P385982	
		Beta-BHC	9.1	U	ng/L	P385982	
		Beta-Cyfluthrin**	17	U	ng/L	P385982	
		Bifenthrin**	4.6	U	ng/L	P385982	
		Delta-BHC	9.1	U	ng/L	P385982	
		Gamma-BHC	9.1	U	ng/L	P385982	
		Chlorothalonil	2.3	U	ng/L	P385982	
		Cis-Nonachlor**	1.1	U	ng/L	P385982	
		Cypermethrin	23	U	ng/L	P385982	
		Dacthal**	1.1	UJ	ng/L	P385982	LCS
		DDD-p,p'	5.7	U	ng/L	P385982	
		DDE-p,p'	5.7	U	ng/L	P385982	
		DDT-p,p'	6.8	U	ng/L	P385982	
		Deltamethrin**	23	U	ng/L	P385982	
		Dicofol	34	UJ	ng/L	P385982	LCS
		Dieldrin	4.6	U	ng/L	P385982	
		Endosulfan I	4.6	U	ng/L	P385982	
		Endosulfan II	4.6	U	ng/L	P385982	
		Endosulfan Sulfate	2.3	U	ng/L	P385982	
		Endrin	2.3	U	ng/L	P385982	
		Endrin Aldehyde	2.3	U	ng/L	P385982	
		Endrin Ketone	2.3	U	ng/L	P385982	
		Ethalfuralin**	3.4	U	ng/L	P385982	
		Gamma-Chlordane	1.1	U	ng/L	P385982	
		Heptachlor	1.7	U	ng/L	P385982	
		Heptachlor Epoxide	2.3	U	ng/L	P385982	
		Hexachlorobenzene	2.3	U	ng/L	P385982	
		Lambda-Cyhalothrin**	17	U	ng/L	P385982	
		Methoxychlor	4.6	U	ng/L	P385982	
		Mirex	2.3	U	ng/L	P385982	
		Permethrin	11	U	ng/L	P385982	

Field ID: G5NW0155

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189482	EPA 8270E	Phenothrin**	34	U	ng/L	P385982	
		Prallethrin**	28	U	ng/L	P385982	
		Trans-Nonachlor**	1.1	U	ng/L	P385982	
		Trifluralin	2.8	U	ng/L	P385982	
		Chlordane	5.7	U	ng/L	P385982	
2189483	EPA 8270E	Toxaphene	34	U	ng/L	P385982	
		Acetochlor	0.26	U	ng/L	P386047	
		Alachlor	0.26	U	ng/L	P386047	
		Ametryn	0.63	U	ng/L	P386047	
		Atrazine	6.7		ng/L	P386047	
		Atrazine Desethyl	3.7	I	ng/L	P386047	
		Azinphos Methyl	2.1	U	ng/L	P386047	
		Bromacil	5.0		ng/L	P386047	
		Butylate	0.42	U	ng/L	P386047	
		Carbophenothion	0.52	U	ng/L	P386047	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P386047	
		Chlorpyrifos Methyl	0.052	U	ng/L	P386047	
		Cyanazine	3.4	UJ	ng/L	P386047	RPD
		Demeton	1.6	U	ng/L	P386047	
		Diazinon	0.13	U	ng/L	P386047	
		Dimethenamid**	0.10	U	ng/L	P386047	
		Disulfoton	0.52	U	ng/L	P386047	
		Dithiopyr**	0.16	I	ng/L	P386047	
		EPTC	1.3	U	ng/L	P386047	
		Ethion	0.16	U	ng/L	P386047	
		Ethoprop	0.10	U	ng/L	P386047	
		Fenamiphos	0.52	U	ng/L	P386047	
		Fipronil	0.75	I	ng/L	P386047	
		Fipronil Desulfinyl**	0.52		ng/L	P386047	
		Fipronil Sulfide	0.64	J	ng/L	P386047	
		Fipronil Sulfone	2.9	J	ng/L	P386047	
		Flumioxazin**	1.8	U	ng/L	P386047	MS
		Fonofos	0.21	U	ng/L	P386047	
		Hexazinone	0.52	U	ng/L	P386047	
		Imazalil**	0.78	U	ng/L	P386047	
		Malathion	0.37	U	ng/L	P386047	
		Metalaxyl	2.8	I	ng/L	P386047	
		Metolachlor	0.52	U	ng/L	P386047	
		Metribuzin	3.4	U	ng/L	P386047	
		Mevinphos	0.52	U	ng/L	P386047	
		Molinate	0.31	UJ	ng/L	P386047	RPD
		Naled**	1.6	U	ng/L	P386047	
		Norflurazon	0.52	U	ng/L	P386047	
		Oxadiazon	0.53		ng/L	P386047	
		Parathion Ethyl	0.26	U	ng/L	P386047	

Field ID: G5NW0155

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189483	EPA 8270E	Parathion Methyl	0.57	U	ng/L	P386047	
		Pendimethalin	1.0	U	ng/L	P386047	
		Phorate	0.26	U	ng/L	P386047	
		Prodiamine**	0.18	U	ng/L	P386047	
		Prometon	0.94	U	ng/L	P386047	
		Prometryn	0.21	U	ng/L	P386047	
		Pronamide**	0.16	U	ng/L	P386047	
		Propiconazole**	0.52	U	ng/L	P386047	
		Simazine	2.0	I	ng/L	P386047	
		Sulfentrazone**	2.2		ng/L	P386047	
		Tebuconazole**	0.52	UJ	ng/L	P386047	RPD
		Terbufos	0.10	U	ng/L	P386047	
		Terbuthylazine	0.44	U	ng/L	P386047	
2189491	EPA 200.7 Rev. 4.4	Barium	24.6		ug/L	P385910	
		Calcium	6.43		mg/L	P385910	
		Iron	1.16E+03		ug/L	P385910	
		Magnesium	1.88		mg/L	P385910	
		Potassium	1.5		mg/L	P385910	
		Sodium	5.8		mg/L	P385910	
		Zinc	5.0	U	ug/L	P385910	
	EPA 200.8 Rev. 5.4	Aluminum	36		ug/L	P385910	
		Antimony	0.069	I	ug/L	P385910	
		Arsenic	0.72		ug/L	P385910	
		Beryllium	0.010	U	ug/L	P385910	
		Boron**	37.5		ug/L	P385910	
		Cadmium	0.020	U	ug/L	P385910	
		Chromium	0.40	U	ug/L	P385910	
		Cobalt	0.131		ug/L	P385910	
		Copper	0.40	U	ug/L	P385910	
		Lead	0.42		ug/L	P385910	
		Manganese	36.3		ug/L	P385910	
		Molybdenum	0.15	U	ug/L	P385910	
		Nickel	0.50	U	ug/L	P385910	
		Selenium	0.20	U	ug/L	P385910	
		Silver	0.010	U	ug/L	P385910	
		Thallium	0.10	U	ug/L	P385910	
	SM 2340B	Hardness	23.8		mg/L	P385910	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 8321B: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

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

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters in the sample spiked. Estimated value for fipronil sulfide and fipronil sulfone due to internal standard recovery exceeding control limits. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 8384

Event(s)

NW-DIST-2020-08-11-01
NW-DIST-2020-08-11-01

Job(s)

TLH-2020-08-11-27
TLH-2020-08-11-27

Sample(s)

2189464
2189467

Test(s)

NCR Type: CUSTODY

NCR Category: General

Observation: Samples were not stored in refrigerator overnight on 08/12/2020.

Resolution:

Samples were returned to refrigerator at 10:15 am on 08/13/2020. Data will be qualified as appropriate.

Authorized by/Date: Irina Carbone 9/1/2020

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385911

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385910

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
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: P385910

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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: P386273

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385938

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385942

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385919

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

Reference Method: EPA 8270E
Batch ID: P385982

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P385982

Component	Result	Code	Units
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	25	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
 Batch ID: P386047

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P386047

Component	Result	Code	Units
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 8276
Batch ID: P385982

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

Reference Method: EPA 8321B
Batch ID: P385828

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: EPA 8321B
Batch ID: P385904

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: P386033

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P386033

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

Reference Method: SM 2120 B-2011
Batch ID: P385922

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P385923

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385989

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

Reference Method: SM 2540 C-2011
Batch ID: P386182

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P386223

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385980

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: P385910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	104		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	104		P	85 - 115
Sodium	102		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	104		P	85 - 115
Boron	100		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	107		P	85 - 115
Copper	106		P	85 - 115
Lead	108		P	85 - 115
Manganese	106		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	105		P	85 - 115
Selenium	100		P	85 - 115
Silver	107		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P385938

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P385942

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P385919

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

Reference Method: EPA 8270E

Batch ID: P385982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	52.6	56.3	P/P	20 - 87.0
Alpha-BHC	96.0	95.9	P/P	65 - 142
Alpha-Chlordane	87.2	89.9	P/P	58 - 106
Beta-BHC	142	147	P/P	65 - 179
Beta-Cyfluthrin	87.6	90.2	P/P	39 - 153
Bifenthrin	76.8	76.0	P/P	38 - 128
Chlorothalonil	74.0	77.1	P/P	20 - 214
Cis-Nonachlor	88.6	91.9	P/P	56 - 113
Cypermethrin	86.7	86.8	P/P	37 - 130
Dacthal	105	110	P/F	75 - 109
DDD-p,p'	96.7	98.9	P/P	66 - 119
DDE-p,p'	81.8	84.6	P/P	53 - 108
DDT-p,p'	91.2	91.0	P/P	57 - 133
Delta-BHC	166	158	P/P	68 - 187
Deltamethrin	106	109	P/P	50 - 200
Dicofol	116	129	P/F	66 - 123
Dieldrin	96.4	98.1	P/P	65 - 111
Endosulfan I	93.6	97.5	P/P	65 - 115
Endosulfan II	98.6	113	P/P	68 - 133
Endosulfan Sulfate	106	106	P/P	62 - 127
Endrin	92.1	92.9	P/P	64 - 122
Endrin Aldehyde	93.8	115	P/P	61 - 132
Endrin Ketone	112	111	P/P	66 - 120
Ethalfuralin	84.0	83.5	P/P	57 - 127
Gamma-BHC	123	125	P/P	71 - 158
Gamma-Chlordane	82.8	84.3	P/P	53 - 106
Heptachlor	70.9	72.3	P/P	45 - 96.0
Heptachlor Epoxide	94.2	98.1	P/P	64 - 109
Hexachlorobenzene	71.0	78.1	P/P	46 - 103
Lambda-Cyhalothrin	89.7	89.5	P/P	38 - 145
Methoxychlor	106	106	P/P	69 - 149
Mirex	66.7	65.4	P/P	31 - 90.0
Permethrin	76.3	81.9	P/P	41 - 108
Phenothrin	60.3	61.8	P/P	22 - 91.0

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P385982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prallethrin	73.7	78.5	P/P	32 - 92.0
Trans-Nonachlor	84.4	86.8	P/P	50 - 107
Trifluralin	84.2	84.3	P/P	58 - 119

Reference Method: EPA 8270E
 Batch ID: P386047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.3	99.3	P/P	71 - 122
Alachlor	93.6	98.9	P/P	70 - 121
Ametryn	93.8	108	P/P	49 - 137
Atrazine	97.8	100	P/P	76 - 125
Atrazine Desethyl	74.7	85.3	P/P	31 - 144
Azinphos Methyl	116	138	P/P	67 - 150
Bromacil	90.8	98.4	P/P	36 - 121
Butylate	52.0	67.6	P/P	33 - 88.0
Carbophenothion	93.8	91.0	P/P	50 - 150
Chlorpyrifos Ethyl	87.1	92.8	P/P	73 - 117
Chlorpyrifos Methyl	81.7	102	P/P	68 - 121
Cyanazine	109	150	P/P	20 - 250
Demeton	74.4	99.6	P/P	30 - 123
Diazinon	93.7	103	P/P	70 - 128
Dimethenamid	92.3	94.7	P/P	66 - 122
Disulfoton	77.9	93.3	P/P	46 - 124
Dithiopyr	94.6	91.1	P/P	69 - 122
EPTC	48.3	63.7	P/P	31 - 90.0
Ethion	106	79.6	P/P	45 - 135
Ethoprop	76.0	102	P/P	59 - 118
Fenamiphos	91.9	86.4	P/P	30 - 136
Fipronil	101	105	P/P	57 - 127
Fipronil Desulfinyl	99.2	102	P/P	51 - 122
Fipronil Sulfide	93.2	95.7	P/P	57 - 119
Fipronil Sulfone	92.7	98.8	P/P	51 - 119
Flumioxazin	139	177	P/P	70 - 200
Fonofos	74.5	98.7	P/P	60 - 120
Hexazinone	93.9	89.2	P/P	57 - 142
Imazalil	90.6	101	P/P	50 - 150
Malathion	98.3	118	P/P	67 - 128
Metaxyl	95.4	96.5	P/P	21 - 148
Metolachlor	94.5	93.8	P/P	70 - 120
Metribuzin	98.8	108	P/P	20 - 253
Mevinphos	70.2	85.4	P/P	47 - 116
Molinate	54.1	81.8	P/P	41 - 99.0
Naled	58.5	74.7	P/P	40 - 130
Norflurazon	95.3	89.3	P/P	54 - 127
Oxadiazon	96.3	86.7	P/P	65 - 122
Parathion Ethyl	98.5	102	P/P	71 - 113
Parathion Methyl	93.1	114	P/P	73 - 129
Pendimethalin	89.0	77.5	P/P	63 - 130
Phorate	70.2	88.5	P/P	48 - 118
Prodiamine	118	111	P/P	20 - 144
Prometon	93.7	103	P/P	53 - 120

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P386047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometryn	96.5	107	P/P	63 - 119
Pronamide	96.8	91.9	P/P	50 - 150
Propiconazole	92.2	89.7	P/P	50 - 150
Simazine	93.8	103	P/P	77 - 129
Sulfentrazone	82.0	85.2	P/P	50 - 150
Tebuconazole	67.6	21.7	P/P	20 - 118
Terbufos	78.2	99.9	P/P	61 - 119
Terbuthylazine	99.3	99.2	P/P	75 - 119

Reference Method: EPA 8276
 Batch ID: P385982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.0	75.9	P/P	47 - 119
Toxaphene	65.8	66.7	P/P	41 - 112

Reference Method: EPA 8321B
 Batch ID: P385828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	86.2		P	30 - 160
Aldicarb	63.7		P	30 - 160
Aldicarb Sulfone	91.8		P	30 - 160
Aldicarb Sulfoxide	98.5		P	30 - 160
Carbaryl	45.4		P	30 - 160
Carbofuran	47.6		P	30 - 160
Methiocarb	49.4		P	30 - 160
Methomyl	97.2		P	30 - 160
Oxamyl	88.6		P	30 - 160
Propoxur	42.5		P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P385904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	135		P	40 - 150
AMPA	78.2		P	40 - 150
Endothall	86.6		P	40 - 150
Glufosinate	84.0		P	40 - 150
Glyphosate	69.5		P	40 - 140
Sucralose	82.8		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P386033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	106		P	30 - 160
Acetaminophen	79.6		P	30 - 160
Acetamiprid	75.6		P	30 - 160
Afidopyropen	56.3		P	30 - 160
Bentazon	70.3		P	30 - 160
Benzovindiflupyr	65.8		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P386033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbamazepine	64.0		P	30 - 160
Clothianidin	74.9		P	30 - 160
Dinotefuran	84.9		P	30 - 160
Diuron	55.6		P	30 - 160
Fenuron	80.9		P	30 - 160
Fluridone	70.6		P	30 - 160
Hydrocodone	79.2		P	30 - 160
Ibuprofen	86.4		P	30 - 160
Imazapyr	77.3		P	30 - 160
Imidacloprid	88.3		P	30 - 160
Linuron	64.6		P	30 - 160
Mandestrobin	73.6		P	30 - 160
MCPP	104		P	30 - 160
Naproxen	68.2		P	30 - 160
Primidone	78.2		P	30 - 160
Pyraclostrobin	60.4		P	30 - 160
Thiamethoxam	78.0		P	30 - 160
Tolfenpyrad	43.7		P	30 - 160
Triclopyr	95.8		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P385922

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	104		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P385923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	104		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P385989

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

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385980

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189410	Barium	103	103	P/P	80 - 120
2189410	Calcium	104		P	80 - 120
2189410	Iron	104	106	P/P	80 - 120
2189410	Magnesium	106		P	80 - 120
2189410	Potassium	103	104	P/P	80 - 120
2189410	Sodium	103		P	80 - 120
2189410	Zinc	105	105	P/P	80 - 120
2189491	Barium	98.7		P	80 - 120
2189491	Calcium	105		P	80 - 120
2189491	Iron	103		P	80 - 120
2189491	Magnesium	102		P	80 - 120
2189491	Potassium	101		P	80 - 120
2189491	Sodium	103		P	80 - 120
2189491	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189410	Aluminum	97.0	100	P/P	80 - 120
2189410	Antimony	103	107	P/P	80 - 120
2189410	Arsenic	101	103	P/P	80 - 120
2189410	Beryllium	94.9	104	P/P	80 - 120
2189410	Boron	100	104	P/P	80 - 120
2189410	Cadmium	103	107	P/P	80 - 120
2189410	Chromium	104	106	P/P	80 - 120
2189410	Cobalt	104	107	P/P	80 - 120
2189410	Copper	103	104	P/P	80 - 120
2189410	Lead	108	111	P/P	80 - 120
2189410	Molybdenum	101	106	P/P	80 - 120
2189410	Nickel	100	105	P/P	80 - 120
2189410	Selenium	97.5	101	P/P	80 - 120
2189410	Silver	103	105	P/P	80 - 120
2189410	Thallium	108	112	P/P	80 - 120
2189491	Aluminum	101		P	80 - 120
2189491	Antimony	105		P	80 - 120
2189491	Arsenic	101		P	80 - 120
2189491	Beryllium	99.9		P	80 - 120
2189491	Boron	103		P	80 - 120
2189491	Cadmium	106		P	80 - 120
2189491	Chromium	105		P	80 - 120
2189491	Cobalt	107		P	80 - 120
2189491	Copper	104		P	80 - 120
2189491	Lead	110		P	80 - 120
2189491	Manganese	104		P	80 - 120
2189491	Molybdenum	105		P	80 - 120
2189491	Nickel	103		P	80 - 120
2189491	Selenium	96.5		P	80 - 120
2189491	Silver	107		P	80 - 120
2189491	Thallium	108		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189370	Chloride	98.8		P	90 - 110
2189507	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189370	Sulfate	100		P	90 - 110
2189507	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189467	Ammonia-N	99.0	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189505	Kjeldahl Nitrogen	106	92.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385938

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189464	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189464	Total-P	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189506	O-Phosphate-P	98.8	99.4	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P385982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189482	Aldrin	54.4	54.3	P/P	32 - 82.0
2189482	Alpha-BHC	92.5	94.2	P/P	68 - 157
2189482	Alpha-Chlordane	71.8	70.1	P/P	54 - 108
2189482	Beta-BHC	133	130	P/P	54 - 200
2189482	Beta-Cyfluthrin	95.6	102	P/P	50 - 154
2189482	Bifenthrin	81.1	81.7	P/P	49 - 124
2189482	Chlorothalonil	96.8	88.0	P/P	10 - 289
2189482	Cis-Nonachlor	75.2	74.3	P/P	53 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P385982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189482	Cypermethrin	91.9	93.8	P/P	43 - 141
2189482	Dacthal	94.4	93.2	P/P	75 - 112
2189482	DDD-p,p'	75.6	74.9	P/P	58 - 125
2189482	DDE-p,p'	66.0	65.5	P/P	50 - 108
2189482	DDT-p,p'	71.7	71.0	P/P	52 - 140
2189482	Delta-BHC	169	185	P/P	61 - 228
2189482	Deltamethrin	114	113	P/P	50 - 200
2189482	Dicofol	76.3	67.0	P/P	59 - 130
2189482	Dieldrin	81.4	78.5	P/P	57 - 121
2189482	Endosulfan I	84.3	78.1	P/P	62 - 123
2189482	Endosulfan II	99.2	93.2	P/P	48 - 163
2189482	Endosulfan Sulfate	103	93.1	P/P	63 - 132
2189482	Endrin	77.5	73.8	P/P	58 - 128
2189482	Endrin Aldehyde	79.0	71.3	P/P	44 - 126
2189482	Endrin Ketone	105	104	P/P	68 - 127
2189482	Ethalfuralin	65.2	65.7	P/P	55 - 131
2189482	Gamma-BHC	117	114	P/P	54 - 206
2189482	Gamma-Chlordane	69.1	68.9	P/P	52 - 105
2189482	Heptachlor	61.6	60.4	P/P	47 - 94.0
2189482	Heptachlor Epoxide	81.8	80.9	P/P	61 - 113
2189482	Hexachlorobenzene	63.8	63.9	P/P	45 - 100
2189482	Lambda-Cyhalothrin	116	116	P/P	37 - 165
2189482	Methoxychlor	82.7	82.5	P/P	63 - 153
2189482	Mirex	64.5	64.3	P/P	38 - 90.0
2189482	Permethrin	72.4	76.3	P/P	45 - 112
2189482	Phenothrin	70.6	69.5	P/P	22 - 118
2189482	Prallethrin	72.1	73.6	P/P	21 - 114
2189482	Trans-Nonachlor	69.3	68.2	P/P	50 - 103
2189482	Trifluralin	64.8	64.6	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P386047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2190160	Acetochlor	104	99.4	P/P	68 - 126
2190160	Alachlor	106	101	P/P	66 - 125
2190160	Ametryn	127	112	P/P	31 - 182
2190160	Atrazine Desethyl	61.3	58.3	P/P	13 - 161
2190160	Azinphos Methyl	144	127	P/P	54 - 162
2190160	Bromacil	74.3	66.3	P/P	34 - 144
2190160	Butylate	42.5	37.8	P/P	16 - 92.0
2190160	Carbophenothion	84.5	81.3	P/P	50 - 150
2190160	Chlorpyrifos Ethyl	87.1	83.0	P/P	63 - 124
2190160	Chlorpyrifos Methyl	83.7	80.6	P/P	64 - 125
2190160	Cyanazine	125	115	P/P	13 - 245
2190160	Demeton	82.9	77.3	P/P	20 - 154
2190160	Diazinon	109	102	P/P	66 - 141
2190160	Dimethenamid	106	101	P/P	50 - 130
2190160	Disulfoton	77.2	75.0	P/P	55 - 130
2190160	Dithiopyr	98.2	98.4	P/P	66 - 122
2190160	EPTC	40.1	34.5	P/P	15 - 93.0
2190160	Ethion	90.7	86.7	P/P	15 - 148

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P386047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2190160	Ethoprop	91.2	84.5	P/P	59 - 126
2190160	Fenamiphos	83.7	82.4	P/P	39 - 137
2190160	Fipronil Desulfinyl	108	105	P/P	43 - 121
2190160	Flumioxazin	262	245	F/F	70 - 200
2190160	Fonofos	91.8	87.4	P/P	62 - 128
2190160	Hexazinone	93.5	92.1	P/P	58 - 154
2190160	Imazalil	146	129	P/P	50 - 150
2190160	Malathion	108	99.3	P/P	54 - 135
2190160	Metalaxyl	100	93.6	P/P	46 - 136
2190160	Metolachlor	103	98.4	P/P	62 - 126
2190160	Metribuzin	108	99.2	P/P	44 - 277
2190160	Mevinphos	83.5	75.4	P/P	44 - 135
2190160	Molinate	61.8	52.4	P/P	31 - 104
2190160	Naled	63.1	68.6	P/P	40 - 130
2190160	Norflurazon	95.1	93.4	P/P	32 - 134
2190160	Oxadiazon	88.1	90.0	P/P	55 - 123
2190160	Parathion Ethyl	103	101	P/P	67 - 120
2190160	Parathion Methyl	107	99.8	P/P	70 - 140
2190160	Pendimethalin	104	101	P/P	59 - 145
2190160	Phorate	73.4	69.3	P/P	52 - 127
2190160	Prodiamine	98.7	116	P/P	11 - 157
2190160	Prometon	106	104	P/P	55 - 130
2190160	Prometryn	113	108	P/P	55 - 127
2190160	Pronamide	110	105	P/P	50 - 150
2190160	Propiconazole	104	95.3	P/P	50 - 150
2190160	Simazine	109	102	P/P	58 - 159
2190160	Tebuconazole	75.9	74.2	P/P	10 - 122
2190160	Terbufos	91.4	85.1	P/P	65 - 131
2190160	Terbutylazine	106	103	P/P	63 - 131

Reference Method: EPA 8276
Batch ID: P385982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189486	Chlordane	78.5	79.6	P/P	34 - 129
2189486	Toxaphene	62.3	59.4	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P385828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188553	3-Hydroxycarbofuran	54.0	58.9	P/P	30 - 160
2188553	Aldicarb	39.7	37.5	P/P	30 - 160
2188553	Aldicarb Sulfone	55.6	64.8	P/P	30 - 160
2188553	Aldicarb Sulfoxide	34.3	35.6	P/P	30 - 160
2188553	Carbaryl	34.3	33.9	P/P	30 - 160
2188553	Carbofuran	36.2	35.9	P/P	30 - 160
2188553	Methiocarb	39.5	45.9	P/P	30 - 160
2188553	Methomyl	70.6	73.5	P/P	30 - 160
2188553	Oxamyl	67.0	66.6	P/P	30 - 160
2188553	Propoxur	32.0	32.2	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189477	Acesulfame K	77.9	83.4	P/P	40 - 150
2189477	AMPA	96.5	101	P/P	40 - 150
2189477	Endothall	96.3	101	P/P	40 - 150
2189477	Glufosinate	88.3	84.5	P/P	40 - 150
2189477	Glyphosate	64.0	64.6	P/P	40 - 140
2189477	Sucralose	52.3	67.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P386033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189403	2,4-D	133	110	P/P	30 - 160
2189403	Acetaminophen	80.3	79.4	P/P	30 - 160
2189403	Acetamiprid	78.1	73.9	P/P	30 - 160
2189403	Afidopyropen	56.5	51.4	P/P	30 - 160
2189403	Benzovindiflupyr	68.9	63.8	P/P	30 - 160
2189403	Carbamazepine	56.3	53.7	P/P	30 - 160
2189403	Clothianidin	69.3	66.9	P/P	30 - 160
2189403	Dinotefuran	91.7	85.6	P/P	30 - 160
2189403	Diuron	46.1	49.2	P/P	30 - 160
2189403	Fenuron	70.0	67.5	P/P	30 - 160
2189403	Fluridone	75.9	68.4	P/P	30 - 160
2189403	Hydrocodone	64.5	63.9	P/P	30 - 160
2189403	Ibuprofen	69.0	63.8	P/P	30 - 160
2189403	Imazapyr	92.4	88.4	P/P	30 - 160
2189403	Imidacloprid	114	105	P/P	30 - 160
2189403	Linuron	57.4	58.3	P/P	30 - 160
2189403	Mandestrobin	71.4	66.1	P/P	30 - 160
2189403	MCPP	117	97.7	P/P	30 - 160
2189403	Naproxen	68.4	73.8	P/P	30 - 160
2189403	Primidone	76.8	71.8	P/P	30 - 160
2189403	Pyraclostrobin	71.3	62.7	P/P	30 - 160
2189403	Thiamethoxam	79.4	78.1	P/P	30 - 160
2189403	Tolfenpyrad	42.2	43.1	P/P	30 - 160
2189403	Triclopyr	101	92.0	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189294	Fluoride	101	99.0	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189375	Organic Carbon	96.2	96.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189445	Turbidity	15.2	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189410	Barium	0.133	Spike	P	0 - 20
2189410	Calcium	0.259	Spike	P	0 - 20
2189410	Iron	1.75	Spike	P	0 - 20
2189410	Magnesium	0.858	Spike	P	0 - 20
2189410	Potassium	0.473	Spike	P	0 - 20
2189410	Sodium	2.32	Spike	P	0 - 20
2189410	Zinc	0.0947	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189410	Aluminum	2.49	Spike	P	0 - 20
2189410	Antimony	3.59	Spike	P	0 - 20
2189410	Arsenic	2.54	Spike	P	0 - 20
2189410	Beryllium	9.57	Spike	P	0 - 20
2189410	Boron	2.87	Spike	P	0 - 20
2189410	Cadmium	4.11	Spike	P	0 - 20
2189410	Chromium	2.29	Spike	P	0 - 20
2189410	Cobalt	2.68	Spike	P	0 - 20
2189410	Copper	1.30	Spike	P	0 - 20
2189410	Lead	3.20	Spike	P	0 - 20
2189410	Manganese	2.71	Spike	P	0 - 20
2189410	Molybdenum	4.71	Spike	P	0 - 20
2189410	Nickel	4.26	Spike	P	0 - 20
2189410	Selenium	3.79	Spike	P	0 - 20
2189410	Silver	2.01	Spike	P	0 - 20
2189410	Thallium	3.65	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189370	Chloride	0.0877	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189370	Sulfate	0.332	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189467	Ammonia-N	1.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189505	Kjeldahl Nitrogen	7.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189464	NO2NO3-N	0.378	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189464	Total-P	1.51	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189506	O-Phosphate-P	0.605	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P385982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189482	Aldrin	0.181	Spike	P	0 - 30
2189482	Alpha-BHC	1.91	Spike	P	0 - 30
2189482	Alpha-Chlordane	2.38	Spike	P	0 - 30
2189482	Beta-BHC	2.36	Spike	P	0 - 30
2189482	Beta-Cyfluthrin	6.19	Spike	P	0 - 30
2189482	Bifenthrin	0.655	Spike	P	0 - 30
2189482	Chlorothalonil	9.47	Spike	P	0 - 30
2189482	Cis-Nonachlor	1.18	Spike	P	0 - 30
2189482	Cypermethrin	2.06	Spike	P	0 - 30
2189482	Dacthal	1.29	Spike	P	0 - 30
2189482	DDD-p,p'	0.897	Spike	P	0 - 30
2189482	DDE-p,p'	0.640	Spike	P	0 - 30
2189482	DDT-p,p'	0.969	Spike	P	0 - 30
2189482	Delta-BHC	8.89	Spike	P	0 - 30
2189482	Deltamethrin	0.813	Spike	P	0 - 30
2189482	Dicofol	13.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P385982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189482	Dieldrin	3.57	Spike	P	0 - 30
2189482	Endosulfan I	7.71	Spike	P	0 - 30
2189482	Endosulfan II	6.29	Spike	P	0 - 30
2189482	Endosulfan Sulfate	9.87	Spike	P	0 - 30
2189482	Endrin	4.86	Spike	P	0 - 30
2189482	Endrin Aldehyde	10.1	Spike	P	0 - 30
2189482	Endrin Ketone	1.38	Spike	P	0 - 30
2189482	Ethalfuralin	0.719	Spike	P	0 - 30
2189482	Gamma-BHC	2.46	Spike	P	0 - 30
2189482	Gamma-Chlordane	0.175	Spike	P	0 - 30
2189482	Heptachlor	1.93	Spike	P	0 - 30
2189482	Heptachlor Epoxide	1.14	Spike	P	0 - 30
2189482	Hexachlorobenzene	0.110	Spike	P	0 - 30
2189482	Lambda-Cyhalothrin	0.211	Spike	P	0 - 30
2189482	Methoxychlor	0.191	Spike	P	0 - 30
2189482	Mirex	0.318	Spike	P	0 - 30
2189482	Permethrin	5.28	Spike	P	0 - 30
2189482	Phenothrin	1.66	Spike	P	0 - 30
2189482	Prallethrin	1.98	Spike	P	0 - 30
2189482	Trans-Nonachlor	1.55	Spike	P	0 - 30
2189482	Trifluralin	0.216	Spike	P	0 - 30
LFB	Aldrin	6.76	LCS	P	0 - 30
LFB	Alpha-BHC	0.164	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.96	LCS	P	0 - 30
LFB	Beta-BHC	3.33	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	2.95	LCS	P	0 - 30
LFB	Bifenthrin	1.04	LCS	P	0 - 30
LFB	Chlorothalonil	4.05	LCS	P	0 - 30
LFB	Cis-Nonachlor	3.76	LCS	P	0 - 30
LFB	Cypermethrin	0.123	LCS	P	0 - 30
LFB	Dacthal	4.81	LCS	P	0 - 30
LFB	DDD-p,p'	2.25	LCS	P	0 - 30
LFB	DDE-p,p'	3.44	LCS	P	0 - 30
LFB	DDT-p,p'	0.164	LCS	P	0 - 30
LFB	Delta-BHC	4.91	LCS	P	0 - 30
LFB	Deltamethrin	2.42	LCS	P	0 - 30
LFB	Dicofol	10.4	LCS	P	0 - 30
LFB	Dieldrin	1.73	LCS	P	0 - 30
LFB	Endosulfan I	4.02	LCS	P	0 - 30
LFB	Endosulfan II	13.8	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.183	LCS	P	0 - 30
LFB	Endrin	0.908	LCS	P	0 - 30
LFB	Endrin Aldehyde	20.2	LCS	P	0 - 30
LFB	Endrin Ketone	1.13	LCS	P	0 - 30
LFB	Ethalfuralin	0.611	LCS	P	0 - 30
LFB	Gamma-BHC	1.71	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.86	LCS	P	0 - 30
LFB	Heptachlor	1.90	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.03	LCS	P	0 - 30
LFB	Hexachlorobenzene	9.58	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	0.201	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P385982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Methoxychlor	0.443	LCS	P	0 - 30
LFB	Mirex	2.02	LCS	P	0 - 30
LFB	Permethrin	7.09	LCS	P	0 - 30
LFB	Phenothrin	2.32	LCS	P	0 - 30
LFB	Prallethrin	6.37	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.83	LCS	P	0 - 30
LFB	Trifluralin	0.0365	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P386047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2190160	Acetochlor	4.67	Spike	P	0 - 30
2190160	Alachlor	4.73	Spike	P	0 - 30
2190160	Ametryn	12.0	Spike	P	0 - 30
2190160	Atrazine	0.110	Spike	P	0 - 30
2190160	Atrazine Desethyl	2.03	Spike	P	0 - 30
2190160	Azinphos Methyl	12.6	Spike	P	0 - 30
2190160	Bromacil	11.3	Spike	P	0 - 30
2190160	Butylate	11.8	Spike	P	0 - 30
2190160	Carbophenothion	3.81	Spike	P	0 - 30
2190160	Chlorpyrifos Ethyl	4.89	Spike	P	0 - 30
2190160	Chlorpyrifos Methyl	3.77	Spike	P	0 - 30
2190160	Cyanazine	8.32	Spike	P	0 - 30
2190160	Demeton	7.04	Spike	P	0 - 30
2190160	Diazinon	7.05	Spike	P	0 - 30
2190160	Dimethenamid	4.52	Spike	P	0 - 30
2190160	Disulfoton	2.80	Spike	P	0 - 30
2190160	Dithiopyr	0.175	Spike	P	0 - 30
2190160	EPTC	14.9	Spike	P	0 - 30
2190160	Ethion	4.58	Spike	P	0 - 30
2190160	Ethoprop	7.54	Spike	P	0 - 30
2190160	Fenamiphos	1.55	Spike	P	0 - 30
2190160	Fipronil	0.582	Spike	P	0 - 30
2190160	Fipronil Desulfinyl	3.15	Spike	P	0 - 30
2190160	Fipronil Sulfide	5.27	Spike	P	0 - 30
2190160	Fipronil Sulfone	7.01	Spike	P	0 - 30
2190160	Flumioxazin	6.45	Spike	P	0 - 30
2190160	Fonofos	4.90	Spike	P	0 - 30
2190160	Hexazinone	1.51	Spike	P	0 - 30
2190160	Imazalil	12.1	Spike	P	0 - 30
2190160	Malathion	8.42	Spike	P	0 - 30
2190160	Metalaxyl	6.97	Spike	P	0 - 30
2190160	Metolachlor	4.07	Spike	P	0 - 30
2190160	Metribuzin	8.86	Spike	P	0 - 30
2190160	Mevinphos	10.2	Spike	P	0 - 30
2190160	Molinate	16.5	Spike	P	0 - 30
2190160	Naled	8.25	Spike	P	0 - 30
2190160	Norflurazon	1.83	Spike	P	0 - 30
2190160	Oxadiazon	2.10	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P386047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2190160	Parathion Ethyl	2.25	Spike	P	0 - 30
2190160	Parathion Methyl	7.24	Spike	P	0 - 30
2190160	Pendimethalin	2.71	Spike	P	0 - 30
2190160	Phorate	5.76	Spike	P	0 - 30
2190160	Prodiamine	15.8	Spike	P	0 - 30
2190160	Prometon	2.24	Spike	P	0 - 30
2190160	Prometryn	4.29	Spike	P	0 - 30
2190160	Pronamide	4.88	Spike	P	0 - 30
2190160	Propiconazole	8.26	Spike	P	0 - 30
2190160	Simazine	6.48	Spike	P	0 - 30
2190160	Sulfentrazone	0.899	Spike	P	0 - 30
2190160	Tebuconazole	2.18	Spike	P	0 - 30
2190160	Terbufos	7.13	Spike	P	0 - 30
2190160	Terbutylazine	2.48	Spike	P	0 - 30
LFB	Acetochlor	8.35	LCS	P	0 - 30
LFB	Alachlor	5.59	LCS	P	0 - 30
LFB	Ametryn	14.4	LCS	P	0 - 30
LFB	Atrazine	2.63	LCS	P	0 - 30
LFB	Atrazine Desethyl	13.2	LCS	P	0 - 30
LFB	Azinphos Methyl	17.5	LCS	P	0 - 30
LFB	Bromacil	8.10	LCS	P	0 - 30
LFB	Butylate	26.2	LCS	P	0 - 30
LFB	Carbophenothion	3.05	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.27	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	22.3	LCS	P	0 - 30
LFB	Cyanazine	31.6	LCS	F	0 - 30
LFB	Demeton	29.0	LCS	P	0 - 30
LFB	Diazinon	9.84	LCS	P	0 - 30
LFB	Dimethenamid	2.56	LCS	P	0 - 30
LFB	Disulfoton	17.9	LCS	P	0 - 30
LFB	Dithiopyr	3.77	LCS	P	0 - 30
LFB	EPTC	27.5	LCS	P	0 - 30
LFB	Ethion	28.3	LCS	P	0 - 30
LFB	Ethoprop	29.1	LCS	P	0 - 30
LFB	Fenamiphos	6.13	LCS	P	0 - 30
LFB	Fipronil	4.39	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	2.57	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.72	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.38	LCS	P	0 - 30
LFB	Flumioxazin	23.6	LCS	P	0 - 30
LFB	Fonofos	28.0	LCS	P	0 - 30
LFB	Hexazinone	5.18	LCS	P	0 - 30
LFB	Imazalil	10.8	LCS	P	0 - 30
LFB	Malathion	18.0	LCS	P	0 - 30
LFB	Metalaxyl	1.06	LCS	P	0 - 30
LFB	Metolachlor	0.714	LCS	P	0 - 30
LFB	Metribuzin	8.80	LCS	P	0 - 30
LFB	Mevinphos	19.6	LCS	P	0 - 30
LFB	Molinate	40.8	LCS	F	0 - 30
LFB	Naled	24.3	LCS	P	0 - 30
LFB	Norflurazon	6.42	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P386047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Oxadiazon	10.5	LCS	P	0 - 30
LFB	Parathion Ethyl	3.86	LCS	P	0 - 30
LFB	Parathion Methyl	20.0	LCS	P	0 - 30
LFB	Pendimethalin	13.8	LCS	P	0 - 30
LFB	Phorate	23.1	LCS	P	0 - 30
LFB	Prodiamine	6.34	LCS	P	0 - 30
LFB	Prometon	9.56	LCS	P	0 - 30
LFB	Prometryn	10.0	LCS	P	0 - 30
LFB	Pronamide	5.20	LCS	P	0 - 30
LFB	Propiconazole	2.77	LCS	P	0 - 30
LFB	Simazine	9.36	LCS	P	0 - 30
LFB	Sulfentrazone	3.92	LCS	P	0 - 30
LFB	Tebuconazole	103	LCS	F	0 - 30
LFB	Terbufos	24.4	LCS	P	0 - 30
LFB	Terbutylazine	0.103	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P385982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189486	Chlordane	1.25	Spike	P	0 - 30
2189486	Toxaphene	4.65	Spike	P	0 - 30
LFB	Chlordane	1.46	LCS	P	0 - 30
LFB	Toxaphene	1.31	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188553	3-Hydroxycarbofuran	8.60	Spike	P	0 - 30
2188553	Aldicarb	5.66	Spike	P	0 - 30
2188553	Aldicarb Sulfone	15.4	Spike	P	0 - 30
2188553	Aldicarb Sulfoxide	3.87	Spike	P	0 - 30
2188553	Carbaryl	1.06	Spike	P	0 - 30
2188553	Carbofuran	0.920	Spike	P	0 - 30
2188553	Methiocarb	15.2	Spike	P	0 - 30
2188553	Methomyl	4.02	Spike	P	0 - 30
2188553	Oxamyl	0.604	Spike	P	0 - 30
2188553	Propoxur	0.664	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189477	Acesulfame K	6.77	Spike	P	0 - 30
2189477	AMPA	4.72	Spike	P	0 - 30
2189477	Endothall	4.51	Spike	P	0 - 30
2189477	Glufosinate	4.42	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P385904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189477	Glyphosate	0.985	Spike	P	0 - 30
2189477	Sucralose	22.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P386033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189403	2,4-D	18.4	Spike	P	0 - 30
2189403	Acetaminophen	1.20	Spike	P	0 - 30
2189403	Acetamiprid	5.51	Spike	P	0 - 30
2189403	Afidopyropen	9.43	Spike	P	0 - 30
2189403	Benzovindiflupyr	7.75	Spike	P	0 - 30
2189403	Carbamazepine	4.68	Spike	P	0 - 30
2189403	Clothianidin	3.50	Spike	P	0 - 30
2189403	Dinotefuran	6.95	Spike	P	0 - 30
2189403	Diuron	6.54	Spike	P	0 - 30
2189403	Fenuron	3.65	Spike	P	0 - 30
2189403	Fluridone	9.74	Spike	P	0 - 30
2189403	Hydrocodone	0.931	Spike	P	0 - 30
2189403	Ibuprofen	7.80	Spike	P	0 - 30
2189403	Imazapyr	4.49	Spike	P	0 - 30
2189403	Imidacloprid	7.93	Spike	P	0 - 30
2189403	Linuron	1.47	Spike	P	0 - 30
2189403	Mandestrobin	7.62	Spike	P	0 - 30
2189403	MCPP	18.3	Spike	P	0 - 30
2189403	Naproxen	7.50	Spike	P	0 - 30
2189403	Primidone	6.68	Spike	P	0 - 30
2189403	Pyraclostrobin	12.8	Spike	P	0 - 30
2189403	Thiamethoxam	1.66	Spike	P	0 - 30
2189403	Tolfenpyrad	2.17	Spike	P	0 - 30
2189403	Triclopyr	9.32	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P385922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189369	Color (true)	0.725	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P385923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189504	Color (true)	1.78	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P385989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189294	Total Alkalinity	1.25	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P386182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189458	TDS	0.583	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189294	Fluoride	0.972	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189375	Organic Carbon	0.0442	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2189476
Field Sample ID: G5NW0155

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	46.5	P	30 - 160

Lab Sample ID: 2189477
Field Sample ID: G5NW0155

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.1	P	30 - 160
EPA 8321B	Diuron-d6	55.3	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	51.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	51.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.9	P	30 - 160
EPA 8321B	Primidone-d5	84.8	P	30 - 160
EPA 8321B	Sucralose-d6	70.4	P	30 - 160
EPA 8321B	Sucralose-d6	70.4	P	30 - 160

Lab Sample ID: 2189478
Field Sample ID: G4NW0412

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	53.0	P	30 - 160

Lab Sample ID: 2189479
Field Sample ID: G4NW0412

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.7	P	30 - 160
EPA 8321B	Diuron-d6	55.4	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	50.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	50.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.8	P	30 - 160
EPA 8321B	Primidone-d5	64.3	P	30 - 160
EPA 8321B	Sucralose-d6	56.9	P	30 - 160
EPA 8321B	Sucralose-d6	56.9	P	30 - 160

Lab Sample ID: 2189482
Field Sample ID: G5NW0155

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	64.2	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	49.1	P	34 - 106
EPA 8276	Decachlorobiphenyl	41.0	P	26 - 97.0
EPA 8276	PCNB	69.1	P	38 - 141

Quality Assurance Report Surrogates

Lab Sample ID: 2189483
Field Sample ID: G5NW0155

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	94.0	P	72 - 135
EPA 8270E	Terbufos-d10	93.6	P	57 - 134

Lab Sample ID: 2189484
Field Sample ID: G4NW0412

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	63.9	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	53.8	P	34 - 106
EPA 8276	Decachlorobiphenyl	41.7	P	26 - 97.0
EPA 8276	PCNB	73.6	P	38 - 141

Lab Sample ID: 2189485
Field Sample ID: G4NW0412

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	103	P	72 - 135
EPA 8270E	Terbufos-d10	103	P	57 - 134

Lab Sample ID: 2189486
Field Sample ID: G4NW0505

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	37.6	P	26 - 97.0
EPA 8276	PCNB	66.6	P	38 - 141

Lab Sample ID: 2189568
Field Sample ID: G4NW0505

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.3	P	30 - 160
EPA 8321B	Diuron-d6	43.6	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	55.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	55.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.3	P	30 - 160
EPA 8321B	Primidone-d5	63.8	P	30 - 160
EPA 8321B	Sucralose-d6	46.4	P	30 - 160
EPA 8321B	Sucralose-d6	46.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100393

Included Lab Sample IDs: 2189463, 2189466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100394

Included Lab Sample IDs: 2189465, 2189468

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	98.6	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A100395

Included Lab Sample IDs: 2189463, 2189466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	106	P/P	90 - 115
Color (true)	104	103	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100406

Included Lab Sample IDs: 2189464, 2189467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100407

Included Lab Sample IDs: 2189476, 2189478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	122	P/P	60 - 150
Aldicarb	110	117	P/P	60 - 150
Aldicarb Sulfone	103	108	P/P	50 - 150
Aldicarb Sulfoxide	94.6	104	P/P	50 - 150
Carbaryl	113	111	P/P	60 - 150
Carbofuran	115	118	P/P	50 - 150
Methiocarb	117	115	P/P	50 - 150
Methomyl	102	99.2	P/P	50 - 150
Oxamyl	102	105	P/P	50 - 150
Propoxur	104	105	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A100408

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.1	89.6	P/P	60 - 160
AMPA	98.9	87.1	P/P	60 - 160
Glufosinate	90.3	95.2	P/P	60 - 160
Glufosinate	94.7	90.3	P/P	60 - 160
Glyphosate	78.2	82.8	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100408

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	92.3	84.0	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100428

Included Lab Sample IDs: 2189491, 2189492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	98.2	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100434

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	147	152	P/P	60 - 160
Acesulfame K	152	147	P/P	60 - 160
Endothall	93.9	96.4	P/P	60 - 160
Endothall	96.4	103	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A100436

Included Lab Sample IDs: 2189464, 2189467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	98.0	P/P	90 - 110
Organic Carbon	98.0	97.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100439

Included Lab Sample IDs: 2189463, 2189466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100439

Included Lab Sample IDs: 2189463, 2189466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100458

Included Lab Sample IDs: 2189464, 2189467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100461

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	98.5	P/P	60 - 160
Sucralose	93.5	105	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100478

Included Lab Sample IDs: 2189464, 2189467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	99.7	P/P	90 - 110
Ammonia-N	99.7	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100482

Included Lab Sample IDs: 2189491, 2189492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.9	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100483

Included Lab Sample IDs: 2189491, 2189492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	107	107	P/P	90 - 110
Arsenic	100	99.4	P/P	90 - 110
Boron	100	101	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	102	103	P/P	90 - 110
Cobalt	106	106	P/P	90 - 110
Copper	98.4	97.7	P/P	90 - 110
Lead	106	108	P/P	90 - 110
Manganese	104	104	P/P	90 - 110
Molybdenum	101	101	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	99.3	101	P/P	90 - 110
Silver	106	106	P/P	90 - 110
Thallium	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100515

Included Lab Sample IDs: 2189464, 2189467

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100515

Included Lab Sample IDs: 2189464, 2189467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100543

Included Lab Sample IDs: 2189463, 2189466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A100552

Included Lab Sample IDs: 2189482, 2189484, 2189486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.1		P	80 - 120
Toxaphene	103		P	80 - 120

Reference Method: EPA 8270E

Run ID: A100555

Included Lab Sample IDs: 2189482, 2189484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.4		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	99.0		P	80 - 120
Beta-BHC	120		P	80 - 120
Beta-Cyfluthrin	87.7		P	80 - 120
Bifenthrin	97.5		P	80 - 120
Chlorothalonil	97.7		P	80 - 120
Cis-Nonachlor	97.9		P	80 - 120
Cypermethrin	97.4		P	80 - 120
Dacthal	100		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	119		P	80 - 120
Deltamethrin	104		P	80 - 120
Dicofol	114		P	80 - 120
Dieldrin	94.1		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	115		P	80 - 120
Endosulfan Sulfate	94.4		P	80 - 120
Endrin	99.4		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	97.3		P	80 - 120
Ethalfuralin	98.2		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	96.5		P	80 - 120
Heptachlor	96.3		P	80 - 120
Heptachlor Epoxide	98.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A100555

Included Lab Sample IDs: 2189482, 2189484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexachlorobenzene	100		P	80 - 120
Lambda-Cyhalothrin	96.4		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	97.9		P	80 - 120
Permethrin	95.5		P	80 - 120
Phenothrin	93.4		P	80 - 120
Prallethrin	88.1		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Trifluralin	97.2		P	80 - 120

Reference Method: EPA 8321B

Run ID: A100565

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	86.4	P/P	50 - 150
2,4-D	86.4	98.4	P/P	50 - 150
Acetaminophen	101	112	P/P	60 - 160
Acetaminophen	112	108	P/P	60 - 160
Acetamiprid	106	99.6	P/P	50 - 150
Acetamiprid	99.6	98.0	P/P	50 - 150
Afidopyropen	100	97.7	P/P	50 - 150
Afidopyropen	97.7	94.4	P/P	50 - 150
Bentazon	106	106	P/P	50 - 160
Bentazon	106	135	P/P	50 - 160
Benzovindiflupyr	104	106	P/P	50 - 150
Benzovindiflupyr	106	96.6	P/P	50 - 150
Carbamazepine	93.0	93.5	P/P	60 - 150
Carbamazepine	93.5	93.7	P/P	60 - 150
Clothianidin	101	101	P/P	60 - 150
Clothianidin	101	105	P/P	60 - 150
Dinotefuran	99.3	102	P/P	50 - 150
Dinotefuran	99.6	99.3	P/P	50 - 150
Diuron	103	97.6	P/P	60 - 160
Diuron	97.6	100	P/P	60 - 160
Fenuron	105	109	P/P	60 - 150
Fenuron	109	110	P/P	60 - 150
Fluridone	104	106	P/P	60 - 160
Fluridone	99.9	104	P/P	60 - 160
Hydrocodone	102	109	P/P	60 - 150
Hydrocodone	109	103	P/P	60 - 150
Ibuprofen	84.6	87.3	P/P	50 - 160
Ibuprofen	87.3	77.4	P/P	50 - 160
Imazapyr	101	88.7	P/P	50 - 150
Imazapyr	88.7	97.9	P/P	50 - 150
Imidacloprid	104	107	P/P	60 - 150
Imidacloprid	107	108	P/P	60 - 150
Linuron	107	108	P/P	60 - 150
Linuron	108	103	P/P	60 - 150
Mandestrobin	110	113	P/P	50 - 150
Mandestrobin	113	113	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100565

Included Lab Sample IDs: 2189477, 2189479, 2189568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	101	95.3	P/P	50 - 150
MCP	95.3	93.7	P/P	50 - 150
Naproxen	149	113	P/P	50 - 160
Naproxen	82.2	149	P/P	50 - 160
Primidone	103	96.0	P/P	60 - 150
Primidone	96.0	95.1	P/P	60 - 150
Pyraclostrobin	96.0	96.1	P/P	60 - 150
Pyraclostrobin	96.1	91.4	P/P	60 - 150
Thiamethoxam	103	103	P/P	50 - 150
Thiamethoxam	108	103	P/P	50 - 150
Tolfenpyrad	88.1	87.4	P/P	60 - 150
Tolfenpyrad	97.7	88.1	P/P	60 - 150
Triclopyr	104	98.2	P/P	50 - 150
Triclopyr	104	104	P/P	50 - 150

Reference Method: EPA 8270E

Run ID: A100646

Included Lab Sample IDs: 2189483, 2189485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.3		P	80 - 120
Alachlor	98.5		P	80 - 120
Ametryn	101		P	80 - 120
Atrazine	98.8		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	108		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	99.2		P	80 - 120
Carbophenothion	97.9		P	80 - 120
Chlorpyrifos Ethyl	99.6		P	80 - 120
Chlorpyrifos Methyl	97.3		P	80 - 120
Cyanazine	93.8		P	80 - 120
Demeton	94.6		P	80 - 120
Diazinon	94.5		P	80 - 120
Dimethenamid	98.9		P	80 - 120
Disulfoton	95.1		P	80 - 120
Dithiopyr	99.1		P	80 - 120
EPTC	96.9		P	80 - 120
Ethion	95.6		P	80 - 120
Ethoprop	95.9		P	80 - 120
Fenamiphos	97.2		P	80 - 120
Fipronil	97.2		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	98.0		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Flumioxazin	94.3		P	80 - 120
Fonofos	94.6		P	80 - 120
Hexazinone	97.9		P	80 - 120
Imazalil	95.1		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A100646

Included Lab Sample IDs: 2189483, 2189485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metolachlor	96.9		P	80 - 120
Metribuzin	93.3		P	80 - 120
Mevinphos	95.8		P	80 - 120
Molinate	98.5		P	80 - 120
Naled	97.2		P	80 - 120
Norflurazon	97.8		P	80 - 120
Oxadiazon	100		P	80 - 120
Parathion Ethyl	97.0		P	80 - 120
Parathion Methyl	93.7		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	93.1		P	80 - 120
Prodiamine	97.3		P	80 - 120
Prometon	98.6		P	80 - 120
Prometryn	100		P	80 - 120
Pronamide	99.3		P	80 - 120
Propiconazole	98.4		P	80 - 120
Simazine	95.3		P	80 - 120
Sulfentrazone	98.0		P	80 - 120
Tebuconazole	99.0		P	80 - 120
Terbufos	93.5		P	80 - 120
Terbutylazine	98.7		P	80 - 120

Reference Method: EPA 8270E

Run ID: A100727

Included Lab Sample IDs: 2189485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	97.8		P	80 - 120
Atrazine Desethyl	107		P	80 - 120
Bromacil	98.2		P	80 - 120
Fipronil	99.8		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	98.4		P	80 - 120
Prometon	97.8		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							15.2	
EPA 200.7 Rev. 4.4	Barium	101		103	103	98.7			0.133
	Calcium	104		104	105				0.259
	Iron	104		104	106	103			1.75
	Magnesium	104		106	102				0.858
	Potassium	104		103	104	101			0.473
	Sodium	102		103	103				2.32
	Zinc	103		105	105	102			0.0947
EPA 200.8 Rev. 5.4	Aluminum	100		97.0	100	101			2.49
	Antimony	105		103	107	105			3.59
	Arsenic	102		101	103	101			2.54
	Beryllium	104		94.9	104	99.9			9.57
	Boron	100		100	104	103			2.87
	Cadmium	106		103	107	106			4.11
	Chromium	102		104	106	105			2.29
	Cobalt	107		104	107	107			2.68
	Copper	106		103	104	104			1.30
	Lead	108		108	111	110			3.20
	Manganese	106		104					2.71
	Molybdenum	102		101	106	105			4.71
	Nickel	105		100	105	103			4.26
	Selenium	100		97.5	101	96.5			3.79
	Silver	107		103	105	107			2.01
	Thallium	107		108	112	108			3.65
EPA 300.0 Rev. 2.1	Chloride	97.5		98.8	99.1			0.0877	
	Sulfate	99.2		100	101			0.332	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2		99.0	103				1.81
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105		106	92.2				7.01
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		97.5					0.378
EPA 365.1 Rev. 2.0	Total-P	102		103	101				1.51
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		98.8	99.4				0.605
EPA 8270E	Acetochlor	91.3	99.3	104	99.4		8.35		4.67
	Alachlor	93.6	98.9	106	101		5.59		4.73
	Aldrin	52.6	56.3	54.4	54.3		6.76		0.181
	Alpha-BHC	96.0	95.9	92.5	94.2		0.164		1.91
	Alpha-Chlordane	87.2	89.9	71.8	70.1		2.96		2.38
	Ametryn	93.8	108	112	127		14.4		12.0
	Atrazine	97.8	100				2.63		0.110
	Atrazine Desethyl	74.7	85.3	58.3	61.3		13.2		2.03
	Azinphos Methyl	116	138	127	144		17.5		12.6
	Beta-BHC	142	147	133	130		3.33		2.36
	Beta-Cyfluthrin	87.6	90.2	95.6	102		2.95		6.19
	Bifenthrin	76.8	76.0	81.1	81.7		1.04		0.655
	Bromacil	90.8	98.4	66.3	74.3		8.10		11.3
	Butylate	52.0	67.6	37.8	42.5		26.2		11.8
	Carbophenothion	93.8	91.0	81.3	84.5		3.05		3.81
	Chlorothalonil	74.0	77.1	96.8	88.0		4.05		9.47
	Chlorpyrifos Ethyl	87.1	92.8	87.1	83.0		6.27		4.89
	Chlorpyrifos Methyl	81.7	102	83.7	80.6		22.3		3.77
	Cis-Nonachlor	88.6	91.9	75.2	74.3		3.76		1.18
	Cyanazine	109	150	125	115		31.6		8.32
	Cypermethrin	86.7	86.8	91.9	93.8		0.123		2.06
	Dacthal	105	110	94.4	93.2		4.81		1.29
	DDD-p,p'	96.7	98.9	75.6	74.9		2.25		0.897

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	DDE-p,p'	81.8	84.6	66.0	65.5	3.44		0.640
	DDT-p,p'	91.2	91.0	71.7	71.0	0.164		0.969
	Delta-BHC	166	158	169	185	4.91		8.89
	Deltamethrin	106	109	114	113	2.42		0.813
	Demeton	74.4	99.6	82.9	77.3	29.0		7.04
	Diazinon	93.7	103	109	102	9.84		7.05
	Dicofol	116	129	76.3	67.0	10.4		13.0
	Dieldrin	96.4	98.1	81.4	78.5	1.73		3.57
	Dimethenamid	92.3	94.7	106	101	2.56		4.52
	Disulfoton	77.9	93.3	77.2	75.0	17.9		2.80
	Dithiopyr	94.6	91.1	98.2	98.4	3.77		0.175
	Endosulfan I	93.6	97.5	84.3	78.1	4.02		7.71
	Endosulfan II	98.6	113	99.2	93.2	13.8		6.29
	Endosulfan Sulfate	106	106	103	93.1	0.183		9.87
	Endrin	92.1	92.9	77.5	73.8	0.908		4.86
	Endrin Aldehyde	93.8	115	79.0	71.3	20.2		10.1
	Endrin Ketone	112	111	105	104	1.13		1.38
	EPTC	48.3	63.7	40.1	34.5	27.5		14.9
	Ethalfuralin	84.0	83.5	65.2	65.7	0.611		0.719
	Ethion	106	79.6	90.7	86.7	28.3		4.58
	Ethoprop	76.0	102	91.2	84.5	29.1		7.54
	Fenamiphos	91.9	86.4	83.7	82.4	6.13		1.55
	Fipronil	101	105			4.39		0.582
	Fipronil Desulfinyl	99.2	102	108	105	2.57		3.15
	Fipronil Sulfide	93.2	95.7			2.72		5.27
	Fipronil Sulfone	92.7	98.8			6.38		7.01
	Flumioxazin	139	177	262	245	23.6		6.45
	Fonofos	74.5	98.7	87.4	91.8	28.0		4.90
	Gamma-BHC	123	125	117	114	1.71		2.46
	Gamma-Chlordane	82.8	84.3	69.1	68.9	1.86		0.175
	Heptachlor	70.9	72.3	61.6	60.4	1.90		1.93
	Heptachlor Epoxide	94.2	98.1	81.8	80.9	4.03		1.14
	Hexachlorobenzene	71.0	78.1	63.8	63.9	9.58		0.110
	Hexazinone	93.9	89.2	92.1	93.5	5.18		1.51
	Imazalil	90.6	101	129	146	10.8		12.1
	Lambda-Cyhalothrin	89.7	89.5	116	116	0.201		0.211
	Malathion	98.3	118	99.3	108	18.0		8.42
	Metalaxyl	95.4	96.5	93.6	100	1.06		6.97
	Methoxychlor	106	106	82.7	82.5	0.443		0.191
	Metolachlor	94.5	93.8	98.4	103	0.714		4.07
	Metribuzin	98.8	108	99.2	108	8.80		8.86
	Mevinphos	70.2	85.4	75.4	83.5	19.6		10.2
	Mirex	66.7	65.4	64.5	64.3	2.02		0.318
	Molinate	54.1	81.8	52.4	61.8	40.8		16.5
	Naled	58.5	74.7	68.6	63.1	24.3		8.25
	Norflurazon	95.3	89.3	93.4	95.1	6.42		1.83
	Oxadiazon	96.3	86.7	90.0	88.1	10.5		2.10
	Parathion Ethyl	98.5	102	101	103	3.86		2.25
	Parathion Methyl	93.1	114	99.8	107	20.0		7.24
	Pendimethalin	89.0	77.5	101	104	13.8		2.71
	Permethrin	76.3	81.9	72.4	76.3	7.09		5.28
	Phenothrin	60.3	61.8	70.6	69.5	2.32		1.66
	Phorate	70.2	88.5	69.3	73.4	23.1		5.76
	Prallethrin	73.7	78.5	72.1	73.6	6.37		1.98

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Prodiamine	118	111	116	98.7	6.34		15.8
	Prometon	93.7	103	104	106	9.56		2.24
	Prometryn	96.5	107	108	113	10.0		4.29
	Pronamide	96.8	91.9	105	110	5.20		4.88
	Propiconazole	92.2	89.7	95.3	104	2.77		8.26
	Simazine	93.8	103	102	109	9.36		6.48
	Sulfentrazone	82.0	85.2			3.92		0.899
	Tebuconazole	67.6	21.7	74.2	75.9	103		2.18
	Terbufos	78.2	99.9	85.1	91.4	24.4		7.13
	Terbutylazine	99.3	99.2	103	106	0.103		2.48
	Trans-Nonachlor	84.4	86.8	69.3	68.2	2.83		1.55
	Trifluralin	84.2	84.3	64.8	64.6	0.0365		0.216
EPA 8276	Chlordane	77.0	75.9	78.5	79.6	1.46		1.25
	Toxaphene	65.8	66.7	62.3	59.4	1.31		4.65
EPA 8321B	2,4-D	106		133	110			18.4
	3-Hydroxycarbofuran	86.2		54.0	58.9			8.60
	Acesulfame K	135		77.9	83.4			6.77
	Acetaminophen	79.6		80.3	79.4			1.20
	Acetamiprid	75.6		78.1	73.9			5.51
	Afidopyropen	56.3		56.5	51.4			9.43
	Aldicarb	63.7		39.7	37.5			5.66
	Aldicarb Sulfone	91.8		55.6	64.8			15.4
	Aldicarb Sulfoxide	98.5		34.3	35.6			3.87
	AMPA	78.2		96.5	101			4.72
	Bentazon	70.3						
	Benzovindiflupyr	65.8		68.9	63.8			7.75
	Carbamazepine	64.0		56.3	53.7			4.68
	Carbaryl	45.4		34.3	33.9			1.06
	Carbofuran	47.6		36.2	35.9			0.920
	Clothianidin	74.9		69.3	66.9			3.50
	Dinotefuran	84.9		91.7	85.6			6.95
	Diuron	55.6		46.1	49.2			6.54
	Endothall	86.6		96.3	101			4.51
	Fenuron	80.9		70.0	67.5			3.65
	Fluridone	70.6		75.9	68.4			9.74
	Glufosinate	84.0		88.3	84.5			4.42
	Glyphosate	69.5		64.0	64.6			0.985
	Hydrocodone	79.2		64.5	63.9			0.931
	Ibuprofen	86.4		69.0	63.8			7.80
	Imazapyr	77.3		92.4	88.4			4.49
	Imidacloprid	88.3		114	105			7.93
	Linuron	64.6		57.4	58.3			1.47
	Mandestrobin	73.6		71.4	66.1			7.62
	MCPP	104		117	97.7			18.3
	Methiocarb	49.4		39.5	45.9			15.2
	Methomyl	97.2		70.6	73.5			4.02
	Naproxen	68.2		68.4	73.8			7.50
	Oxamyl	88.6		67.0	66.6			0.604
	Primidone	78.2		76.8	71.8			6.68
	Propoxur	42.5		32.0	32.2			0.664
	Pyraclostrobin	60.4		71.3	62.7			12.8
	Sucralose	82.8		52.3	67.9			22.2
	Thiamethoxam	78.0		79.4	78.1			1.66
	Tolfenpyrad	43.7		42.2	43.1			2.17

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Triclopyr	95.8	101	92.0			9.32
SM 2120 B-2011	Color (true)	104				0.725	
	Color (true)	104				1.78	
SM 2320 B-2011	Total Alkalinity	99.4				1.25	
SM 2540 C-2011	TDS					0.583	
SM 4500 F-C-2011	Fluoride	98.0	99.0	101			0.972
SM 5310 B-2011	Organic Carbon	97.4	96.2	96.2			0.0442

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2189463, 2189466
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2189491, 2189492
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2189491, 2189492
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2189463, 2189466
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2189463, 2189466
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2189464, 2189467
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2189464, 2189467
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2189464, 2189467
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2189464, 2189467
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2189465, 2189468
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2189482, 2189484
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2189483, 2189485
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2189482, 2189484, 2189486
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2189476, 2189478
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2189477, 2189479, 2189568
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2189477, 2189479, 2189568
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2189463, 2189466
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2189463, 2189466
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2189491, 2189492
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2189463, 2189466
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2189463, 2189466
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2189463, 2189466
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2189464, 2189467

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	08/11/2020			08/11/2020 15:24	Yen Ta	2189463, 2189466
EPA 200.7 Rev. 4.4	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/12/2020 17:18	Betina Topolski	2189491
	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/12/2020 17:39	Betina Topolski	2189492
EPA 200.8 Rev. 5.4	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/15/2020 16:46	Alexander Thompson	2189492
	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/15/2020 16:50	Alexander Thompson	2189491
	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/16/2020 01:47	Alexander Thompson	2189492
	08/11/2020	08/11/2020 15:55	Elliott D. Healy	08/16/2020 02:30	Alexander Thompson	2189491
EPA 300.0 Rev. 2.1	08/11/2020			08/18/2020 03:54	Julia Storbeck	2189463
	08/11/2020			08/18/2020 04:06	Julia Storbeck	2189466
EPA 350.1 Rev. 2.0	08/11/2020			08/15/2020 14:33	Ping Hua	2189467
	08/11/2020			08/15/2020 14:53	Ping Hua	2189464
EPA 351.2 Rev. 2.0	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 15:09	Jhamieka S. Greenwood	2189464
	08/11/2020	08/17/2020 09:42	David Boose	08/18/2020 15:11	Jhamieka S. Greenwood	2189467
EPA 353.2 Rev. 2.0	08/11/2020			08/12/2020 09:16	Beverly Y. Sanders	2189464
	08/11/2020			08/12/2020 10:07	Beverly Y. Sanders	2189467
EPA 365.1 Rev. 2.0	08/11/2020	08/12/2020 11:41	Yen Ta	08/14/2020 08:37	Lipi Saha	2189464
	08/11/2020	08/12/2020 11:41	Yen Ta	08/14/2020 08:38	Lipi Saha	2189467
EPA 365.1 Rev. 2.0 dissolved	08/11/2020			08/11/2020 15:46	Jhamieka S. Greenwood	2189465
	08/11/2020			08/11/2020 15:47	Jhamieka S. Greenwood	2189468
EPA 8270E	08/11/2020	08/14/2020 08:30	Rasheda Ghaffari	08/18/2020 17:31	Michael Poppell	2189482
	08/11/2020	08/14/2020 08:30	Rasheda Ghaffari	08/18/2020 18:03	Michael Poppell	2189484
	08/11/2020	08/17/2020 08:00	Fe-Val Siddell	08/20/2020 17:25	Vandana T. Nagar	2189483
	08/11/2020	08/17/2020 08:00	Fe-Val Siddell	08/20/2020 17:50	Vandana T. Nagar	2189485
	08/11/2020	08/17/2020 08:00	Fe-Val Siddell	08/26/2020 18:28	Vandana T. Nagar	2189485
EPA 8276	08/11/2020	08/14/2020 08:30	Rasheda Ghaffari	08/19/2020 00:38	Arthur Maknenko	2189486
	08/11/2020	08/14/2020 08:30	Rasheda Ghaffari	08/19/2020 01:33	Arthur Maknenko	2189482
	08/11/2020	08/14/2020 08:30	Rasheda Ghaffari	08/19/2020 02:29	Arthur Maknenko	2189484
EPA 8321B	08/11/2020	08/11/2020 13:00	Hoor Shaik	08/12/2020 12:08	Juyoung Kim	2189476
	08/11/2020	08/11/2020 13:00	Hoor Shaik	08/12/2020 12:42	Juyoung Kim	2189478
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 16:41	Rebecca Ware	2189477
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 16:52	Rebecca Ware	2189479
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/11/2020 18:07	Rebecca Ware	2189568
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 09:46	Rebecca Ware	2189479
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 10:08	Rebecca Ware	2189568
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 19:05	Rebecca Ware	2189477
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 19:19	Rebecca Ware	2189479
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/12/2020 21:09	Rebecca Ware	2189568
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 16:10	Rebecca Ware	2189477
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 16:21	Rebecca Ware	2189479
	08/11/2020	08/11/2020 15:30	Rebecca Ware	08/13/2020 17:44	Rebecca Ware	2189568

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 03:52	Juyoung Kim	2189477
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 04:27	Juyoung Kim	2189479
	08/11/2020	08/17/2020 09:00	Hoor Shaik	08/18/2020 08:30	Juyoung Kim	2189568
SM 2120 B-2011	08/11/2020			08/11/2020 17:00	Benjamin T. Nordmann	2189463
	08/11/2020			08/11/2020 17:05	Benjamin T. Nordmann	2189466
SM 2320 B-2011	08/11/2020			08/12/2020 20:20	Dale L. Simmons	2189463
	08/11/2020			08/12/2020 20:32	Dale L. Simmons	2189466
SM 2340B	08/11/2020			08/12/2020 17:18	Betina Topolski	2189491
	08/11/2020			08/12/2020 17:39	Betina Topolski	2189492
SM 2540 C-2011	08/11/2020			08/12/2020 15:12	Yijie Li	2189463, 2189466
SM 2540 D-2011	08/11/2020			08/12/2020 15:12	Yijie Li	2189463, 2189466
SM 4500 F-C-2011	08/11/2020			08/12/2020 20:20	Dale L. Simmons	2189463
	08/11/2020			08/12/2020 20:32	Dale L. Simmons	2189466
SM 5310 B-2011	08/11/2020			08/13/2020 00:00	David Boose	2189464
	08/11/2020			08/13/2020 00:37	David Boose	2189467