

Chemical Analysis Report

NW-DIST-2020-08-06-01

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

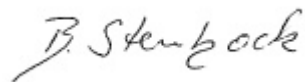
Event Description: **Pace Run**
Request ID: **RQ-2020-08-03-48**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 28-AUG-2020 14:45



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: Coldwater Creek West Fork Downstream of HWY 87

Collection Date/Time: 08/05/2020 10:30

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188987	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P385743	
	EPA 300.0 Rev. 2.1	Chloride	6.0	A	mg Cl/L	P385891	
		Sulfate	0.76	A	mg SO4/L	P385896	
	SM 2120 B-2011	Color (true)	12		PCU	P385746	
	SM 2320 B-2011	Total Alkalinity	3.5		mg CaCO3/L	P385833	
	SM 2540 C-2011	TDS	37		mg/L	P386384	
	SM 2540 D-2011	TSS	2	UJ	mg/L	P385853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385836	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P385807	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P385881	
2188988	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P385765	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P385827	
	SM 5310 B-2011	Organic Carbon	1.4		mg C/L	P385883	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385739	
	EPA 8321B	Aldicarb	0.020	U	ug/L	P385828	
2189007		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	0.0020	U	ug/L	P385679	
2189008		Acesulfame K**	0.10	U	ug/L	P385723	
		AMPA**	0.10	U	ug/L	P385723	
		Sucralose**	0.023	I	ug/L	P385723	
		Acetaminophen**	0.0080	U	ug/L	P385679	
		Acetamiprid**	0.0020	U	ug/L	P385679	
		Endothal**	0.25	U	ug/L	P385723	
		Glufosinate**	0.10	U	ug/L	P385723	
		Glyphosate**	0.10	U	ug/L	P385723	
		Afidopyropen**	0.0020	U	ug/L	P385679	
		Bentazon	0.0033		ug/L	P385679	
		Benzovindiflupyr**	0.0020	U	ug/L	P385679	
		Carbamazepine**	8.0E-04	U	ug/L	P385679	
		Clothianidin**	0.0022	I	ug/L	P385679	
		Dinotefuran**	0.0069	I	ug/L	P385679	
		Diuron	0.0020	U	ug/L	P385679	
		Fenuron	0.016	U	ug/L	P385679	
		Fluridone**	8.0E-04	U	ug/L	P385679	

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189008	EPA 8321B	Imazapyr**	0.0040	U	ug/L	P385679	
		Hydrocodone**	0.0020	U	ug/L	P385679	
		Ibuprofen**	0.055	I	ug/L	P385679	
		Imidacloprid	0.0020	U	ug/L	P385679	
		Linuron	0.0040	U	ug/L	P385679	
		Mandestrobin**	0.0020	U	ug/L	P385679	
		MCPP	0.0020	U	ug/L	P385679	
		Naproxen**	0.0080	U	ug/L	P385679	
		Primidone**	0.0040	U	ug/L	P385679	
		Pyraclostrobin**	0.0020	U	ug/L	P385679	
		Thiamethoxam**	0.0020	U	ug/L	P385679	
		Tolfenpyrad**	0.0020	U	ug/L	P385679	
		Triclopyr**	0.0040	U	ug/L	P385679	
2189010	EPA 8270E	Aldrin	4.4	UJ	ng/L	P385657	SUR
		Alpha-BHC	2.2	UJ	ng/L	P385657	SUR
		Alpha-Chlordane	1.1	UJ	ng/L	P385657	SUR
		Beta-BHC	8.8	UJ	ng/L	P385657	SUR
		Beta-Cyfluthrin**	16	UJ	ng/L	P385657	SUR
		Bifenthrin**	4.4	UJ	ng/L	P385657	SUR
		Delta-BHC	8.8	UJ	ng/L	P385657	SUR
		Gamma-BHC	8.8	UJ	ng/L	P385657	SUR
		Chlorothalonil	2.2	UJ	ng/L	P385657	RPD, SUR
		Cis-Nonachlor**	1.1	UJ	ng/L	P385657	SUR
		Cypermethrin	22	UJ	ng/L	P385657	SUR
		Dacthal**	1.1	UJ	ng/L	P385657	SUR
		DDD-p,p'	5.5	UJ	ng/L	P385657	SUR
		DDE-p,p'	5.5	UJ	ng/L	P385657	SUR
		DDT-p,p'	6.6	UJ	ng/L	P385657	SUR
		Dicofol	33	UJ	ng/L	P385657	SUR
		Dieldrin	4.4	UJ	ng/L	P385657	SUR
		Endosulfan I	4.4	UJ	ng/L	P385657	SUR
		Endosulfan II	4.4	UJ	ng/L	P385657	SUR
		Endosulfan Sulfate	2.2	UJ	ng/L	P385657	SUR
		Endrin	2.2	UJ	ng/L	P385657	SUR
		Endrin Aldehyde	2.2	UJ	ng/L	P385657	MS, RPD, SUR
		Endrin Ketone	2.2	UJ	ng/L	P385657	SUR
		Ethalfuralin**	3.3	UJ	ng/L	P385657	SUR
		Deltamethrin**	22	UJ	ng/L	P385657	SUR
		Gamma-Chlordane	1.1	UJ	ng/L	P385657	SUR
		Heptachlor	1.6	UJ	ng/L	P385657	SUR
		Heptachlor Epoxide	2.2	UJ	ng/L	P385657	SUR
		Hexachlorobenzene	2.2	UJ	ng/L	P385657	SUR
		Lambda-Cyhalothrin**	16	UJ	ng/L	P385657	SUR
		Methoxychlor	4.4	UJ	ng/L	P385657	SUR

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189010	EPA 8270E	Mirex	2.2	UJ	ng/L	P385657	SUR
		Permethrin	11	UJ	ng/L	P385657	SUR
		Phenothrin**	33	UJ	ng/L	P385657	SUR
		Prallethrin**	27	UJ	ng/L	P385657	SUR
		Trans-Nonachlor**	1.1	UJ	ng/L	P385657	SUR
		Trifluralin	2.7	UJ	ng/L	P385657	SUR
		Chlordane	5.5	UJ	ng/L	P385657	SUR
		Toxaphene	33	UJ	ng/L	P385657	CCV, SUR
2189011	EPA 8270E	Acetochlor	0.24	U	ng/L	P385760	
		Alachlor	0.24	U	ng/L	P385760	
		Ametryn	0.57	U	ng/L	P385760	
		Atrazine	0.38	I	ng/L	P385760	
		Atrazine Desethyl	1.4	U	ng/L	P385760	
		Azinphos Methyl	1.9	UJ	ng/L	P385760	LCS
		Bromacil	1.4	I	ng/L	P385760	
		Butylate	0.38	U	ng/L	P385760	
		Carbophenothion	0.48	U	ng/L	P385760	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P385760	
		Chlorpyrifos Methyl	0.048	U	ng/L	P385760	
		Cyanazine	3.1	U	ng/L	P385760	
		Demeton	1.4	U	ng/L	P385760	
		Diazinon	0.12	U	ng/L	P385760	
		Dimethenamid**	0.096	U	ng/L	P385760	
		Disulfoton	0.48	U	ng/L	P385760	
		Dithiopyr**	0.096	U	ng/L	P385760	
		EPTC	1.2	U	ng/L	P385760	
		Ethion	0.14	U	ng/L	P385760	
		Ethoprop	0.096	UJ	ng/L	P385760	LCS, MS
		Fenamiphos	0.48	U	ng/L	P385760	
		Fipronil	0.24	U	ng/L	P385760	
		Fipronil Desulfinyl**	0.12	U	ng/L	P385760	
		Fipronil Sulfide	0.14	U	ng/L	P385760	
		Fipronil Sulfone	0.14	U	ng/L	P385760	
		Flumioxazin**	1.7	U	ng/L	P385760	MS
		Fonofos	0.19	U	ng/L	P385760	
		Hexazinone	2.9	J	ng/L	P385760	
		Imazalil**	0.72	U	ng/L	P385760	
		Malathion	0.33	U	ng/L	P385760	
		Metalaxyl	0.72	U	ng/L	P385760	
		Metolachlor	16		ng/L	P385760	
		Metribuzin	3.1	U	ng/L	P385760	
		Mevinphos	0.48	U	ng/L	P385760	
		Molinate	0.29	U	ng/L	P385760	
		Naled**	1.4	U	ng/L	P385760	
		Norflurazon	1.4	I	ng/L	P385760	

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189011	EPA 8270E	Oxadiazon	0.38		ng/L	P385760	
		Parathion Ethyl	0.24	U	ng/L	P385760	
		Parathion Methyl	0.53	U	ng/L	P385760	
		Pendimethalin	0.96	U	ng/L	P385760	
		Phorate	0.24	U	ng/L	P385760	
		Prodiamine**	0.17	U	ng/L	P385760	
		Prometon	0.86	U	ng/L	P385760	
		Prometryn	0.19	U	ng/L	P385760	
		Pronamide**	0.14	U	ng/L	P385760	
		Propiconazole**	0.48	U	ng/L	P385760	
		Simazine	0.48	U	ng/L	P385760	
		Sulfentrazone**	0.48	UJ	ng/L	P385760	LCS
		Tebuconazole**	0.48	U	ng/L	P385760	MS
		Terbufos	0.096	U	ng/L	P385760	MS
		Terbutylazine	0.41	U	ng/L	P385760	
2189012	EPA 200.7 Rev. 4.4	Barium	72.1		ug/L	P385736	
		Calcium	2.72		mg/L	P385736	
		Iron	270		ug/L	P385736	
		Magnesium	2.19		mg/L	P385736	
		Potassium	0.98	I	mg/L	P385736	
		Sodium	2.3		mg/L	P385736	
		Zinc	5.0	U	ug/L	P385736	
	EPA 200.8 Rev. 5.4	Aluminum	71		ug/L	P385736	
		Antimony	0.050	U	ug/L	P385736	
		Arsenic	0.18	I	ug/L	P385736	
		Beryllium	0.055		ug/L	P385736	
		Boron**	12.7		ug/L	P385736	
		Cadmium	0.020	U	ug/L	P385736	
		Chromium	0.40	U	ug/L	P385736	
		Cobalt	0.518		ug/L	P385736	
		Copper	0.40	U	ug/L	P385736	
		Lead	0.20	U	ug/L	P385736	
		Manganese	24.9		ug/L	P385736	
		Molybdenum	0.15	U	ug/L	P385736	
		Nickel	0.68	I	ug/L	P385736	
		Selenium	0.20	U	ug/L	P385736	
		Silver	0.010	U	ug/L	P385736	
		Thallium	0.10	U	ug/L	P385736	
	SM 2340B	Hardness	15.8		mg/L	P385736	

Field ID: G4NW0017

Matrix: W-SURF-FRH

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. The recovery of the QC standard was outside of the acceptable limit.

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

EPA 8270E: Reported results are J qualified due to the surrogate recovery exceeding control limits; the sample was subsequently re-extracted and re-analyzed beyond expiration with acceptable surrogate recovery and the same analytical results were obtained. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8276: Reported results are J qualified due to the surrogate recovery exceeding control limits; the sample was subsequently re-extracted and re-analyzed beyond expiration with acceptable surrogate recovery and the same analytical results were obtained. 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 hexazinone due to internal standard recovery exceeding control limits. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Coldwater Creek West Fork CR 178

Collection Date/Time: 08/05/2020 11:00

Field ID: G4NW0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188993	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P385744	
	EPA 300.0 Rev. 2.1	Chloride	6.4		mg Cl/L	P385891	
		Sulfate	1.1		mg SO4/L	P385896	
		Color (true)	17	A	PCU	P385746	
	SM 2320 B-2011	Total Alkalinity	4.7		mg CaCO3/L	P385833	
	SM 2540 C-2011	TDS	37		mg/L	P386384	
	SM 2540 D-2011	TSS	2	UJ	mg/L	P385853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385836	
2188995	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P386128	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P385881	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.7		mg N/L	P385766	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P385827	
	SM 5310 B-2011	Organic Carbon	1.8		mg C/L	P385883	
2188997	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385739	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The recovery of the QC standard was outside of the acceptable limit.

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Big Coldwater Creek end of Steel Bridge Rd.

Collection Date/Time: 08/05/2020 11:45

Field ID: G4NW0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188994	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P385744	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P385891	
		Sulfate	0.71		mg SO4/L	P385896	
		Color (true)	14		PCU	P385746	
	SM 2320 B-2011	Total Alkalinity	2.5	I	mg CaCO3/L	P385833	
	SM 2540 C-2011	TDS	28		mg/L	P386384	
	SM 2540 D-2011	TSS	2	UJ	mg/L	P385853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385836	
2188996	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P386128	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P385881	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P385766	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P385827	
	SM 5310 B-2011	Organic Carbon	1.6		mg C/L	P385883	
2188998	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385740	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The recovery of the QC standard was outside of the acceptable limit.

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Big Coldwater Creek Below CR 191

Collection Date/Time: 08/05/2020 12:15

Field ID: G4NW0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188990	EPA 180.1 Rev. 2.0	Turbidity	2.4	A	NTU	P385744	
	EPA 300.0 Rev. 2.1	Chloride	4.4		mg Cl/L	P385891	
		Sulfate	0.71		mg SO4/L	P385896	
	SM 2120 B-2011	Color (true)	13		PCU	P385746	
	SM 2320 B-2011	Total Alkalinity	2.5		mg CaCO3/L	P385833	
	SM 2540 C-2011	TDS	27		mg/L	P386384	
	SM 2540 D-2011	TSS	2	UJ	mg/L	P385853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385836	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P386128	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P385881	
2188991	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P385766	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P385827	
	SM 5310 B-2011	Organic Carbon	1.6		mg C/L	P385883	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P385739	
	dissolved						
2189009	EPA 8321B	2,4-D	0.0020	U	ug/L	P385828	
		Acesulfame K**	0.10	U	ug/L	P385723	
		AMPA**	0.10	U	ug/L	P385723	
		Sucralose**	0.013	I	ug/L	P385723	
		Acetaminophen**	0.0080	U	ug/L	P385828	
		Acetamiprid**	0.0020	U	ug/L	P385828	
		Endothall**	0.25	U	ug/L	P385723	
		Glufosinate**	0.10	U	ug/L	P385723	
		Glyphosate**	0.10	U	ug/L	P385723	
		Afidopyropen**	0.0020	U	ug/L	P385828	
		Bentazon	0.0021	I	ug/L	P385828	
		Benzovindiflupyr**	0.0020	U	ug/L	P385828	
		Carbamazepine**	8.0E-04	U	ug/L	P385828	
		Clothianidin**	0.0020	U	ug/L	P385828	
		Dinotefuran**	0.0031	I	ug/L	P385828	
		Diuron	0.0020	U	ug/L	P385828	
		Fenuron	0.016	U	ug/L	P385828	
		Fluridone**	8.0E-04	U	ug/L	P385828	
		Imazapyr**	0.0040	U	ug/L	P385828	
		Hydrocodone**	0.0020	U	ug/L	P385828	
		Ibuprofen**	0.020	U	ug/L	P385828	
		Imidacloprid	0.0020	U	ug/L	P385828	
		Linuron	0.0040	U	ug/L	P385828	
		Mandestrobin**	0.0020	U	ug/L	P385828	
		MCP	0.0020	U	ug/L	P385828	
		Naproxen**	0.0080	U	ug/L	P385828	
		Primidone**	0.0040	U	ug/L	P385828	
		Pyraclostrobin**	0.0020	U	ug/L	P385828	
		Thiamethoxam**	0.0020	U	ug/L	P385828	

Field ID: G4NW0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189009	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P385828	
		Triclopyr**	0.0040	U	ug/L	P385828	
2189013	EPA 200.7 Rev. 4.4	Barium	42.9		ug/L	P385736	
		Calcium	1.72		mg/L	P385736	
		Iron	270		ug/L	P385736	
		Magnesium	1.32		mg/L	P385736	
		Potassium	0.62	I	mg/L	P385736	
		Sodium	2.1		mg/L	P385736	
		Zinc	5.0	U	ug/L	P385736	
	EPA 200.8 Rev. 5.4	Aluminum	76		ug/L	P385736	
		Antimony	0.050	U	ug/L	P385736	
		Arsenic	0.18	I	ug/L	P385736	
		Beryllium	0.044		ug/L	P385736	
		Boron**	10.6		ug/L	P385736	
		Cadmium	0.020	U	ug/L	P385736	
		Chromium	0.40	U	ug/L	P385736	
		Cobalt	0.421		ug/L	P385736	
		Copper	0.40	U	ug/L	P385736	
		Lead	0.20	U	ug/L	P385736	
		Manganese	16.8		ug/L	P385736	
		Molybdenum	0.15	U	ug/L	P385736	
		Nickel	0.56	I	ug/L	P385736	
		Selenium	0.20	U	ug/L	P385736	
		Silver	0.010	U	ug/L	P385736	
		Thallium	0.10	U	ug/L	P385736	
	SM 2340B	Hardness	9.8		mg/L	P385736	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The recovery of the QC standard was outside of the acceptable limit.

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 8366

Event(s)

NW-DIST-2020-08-06-01

Job(s)

TLH-2020-08-06-71

Sample(s)

2189011

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Sample Integrity

Observation: Sample container received with cracked cap.

Resolution: Additional containers logged in.

Authorized by/Date: Joshua Ayres 8/10/2020

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: P385743

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385744

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385736

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: P385736

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: P385891

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385896

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385807

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386128

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385881

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385765

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385766

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385827

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385739

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385740

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

Reference Method: EPA 8270E
Batch ID: P385657

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P385657

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'	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
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: P385760

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P385760

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

Reference Method: EPA 8276
Batch ID: P385657

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

Reference Method: EPA 8321B
Batch ID: P385679

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385679

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

Reference Method: EPA 8321B
Batch ID: P385723

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: P385828

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385828

Component	Result	Code	Units
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 2120 B-2011
Batch ID: P385746

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385833

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

Reference Method: SM 2540 C-2011
Batch ID: P386384

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385853

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385836

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P385883

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: P385736

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	104		P	85 - 115
Iron	102		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	100		P	85 - 115
Sodium	98.1		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385736

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.8		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	104		P	85 - 115
Boron	104		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	102		P	85 - 115
Copper	98.1		P	85 - 115
Lead	105		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	98.4		P	85 - 115
Nickel	98.3		P	85 - 115
Selenium	99.3		P	85 - 115
Silver	110		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385891

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385896

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385807

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386128

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P385881

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385765

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385827

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385739

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385740

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

Reference Method: EPA 8270E
 Batch ID: P385657

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.2	52.4	P/P	20 - 87.0
Alpha-BHC	86.4	87.2	P/P	65 - 142
Alpha-Chlordane	90.6	86.9	P/P	58 - 106
Beta-BHC	96.3	99.0	P/P	65 - 179
Beta-Cyfluthrin	88.8	84.5	P/P	39 - 153
Bifenthrin	87.4	88.2	P/P	38 - 128
Chlorothalonil	73.5	55.7	P/P	20 - 214
Cis-Nonachlor	92.3	88.7	P/P	56 - 113
Cypermethrin	85.6	86.0	P/P	37 - 130
Dacthal	99.8	94.1	P/P	75 - 109
DDD-p,p'	101	95.7	P/P	66 - 119
DDE-p,p'	90.3	85.1	P/P	53 - 108
DDT-p,p'	96.7	97.5	P/P	57 - 133
Delta-BHC	115	114	P/P	68 - 187
Deltamethrin	100	100	P/P	50 - 200
Dicofol	98.3	99.2	P/P	66 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P385657

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dieldrin	96.4	90.9	P/P	65 - 111
Endosulfan I	100	92.7	P/P	65 - 115
Endosulfan II	117	114	P/P	68 - 133
Endosulfan Sulfate	91.7	90.8	P/P	62 - 127
Endrin	98.3	91.9	P/P	64 - 122
Endrin Aldehyde	92.7	88.0	P/P	61 - 132
Endrin Ketone	110	108	P/P	66 - 120
Ethalfuralin	80.9	77.4	P/P	57 - 127
Gamma-BHC	89.9	92.6	P/P	71 - 158
Gamma-Chlordane	88.8	84.7	P/P	53 - 106
Heptachlor	71.1	68.0	P/P	45 - 96.0
Heptachlor Epoxide	91.5	87.2	P/P	64 - 109
Hexachlorobenzene	68.3	69.8	P/P	46 - 103
Lambda-Cyhalothrin	85.8	86.9	P/P	38 - 145
Methoxychlor	98.6	100	P/P	69 - 149
Mirex	76.8	74.2	P/P	31 - 90.0
Permethrin	80.8	79.4	P/P	41 - 108
Phenothrin	60.9	57.0	P/P	22 - 91.0
Prallethrin	70.3	61.1	P/P	32 - 92.0
Trans-Nonachlor	89.0	84.9	P/P	50 - 107
Trifluralin	79.9	77.8	P/P	58 - 119

Reference Method: EPA 8270E
 Batch ID: P385760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	116	109	P/P	71 - 122
Alachlor	113	104	P/P	70 - 121
Ametryn	116	103	P/P	49 - 137
Atrazine	117	110	P/P	76 - 125
Atrazine Desethyl	97.1	88.5	P/P	31 - 144
Azinphos Methyl	136	153	P/F	67 - 150
Bromacil	116	115	P/P	36 - 121
Butylate	75.7	72.8	P/P	33 - 88.0
Carbophenothion	96.3	88.5	P/P	50 - 150
Chlorpyrifos Ethyl	101	93.7	P/P	73 - 117
Chlorpyrifos Methyl	109	102	P/P	68 - 121
Cyanazine	148	137	P/P	20 - 250
Demeton	81.1	73.5	P/P	30 - 123
Diazinon	127	120	P/P	70 - 128
Dimethenamid	110	104	P/P	66 - 122
Disulfoton	103	90.6	P/P	46 - 124
Dithiopyr	108	98.9	P/P	69 - 122
EPTC	74.4	71.2	P/P	31 - 90.0
Ethion	51.9	48.6	P/P	45 - 135
Ethoprop	119	112	F/P	59 - 118
Fenamiphos	81.8	70.0	P/P	30 - 136
Fipronil	117	110	P/P	57 - 127
Fipronil Desulfinyl	117	109	P/P	51 - 122
Fipronil Sulfide	91.7	84.3	P/P	57 - 119
Fipronil Sulfone	86.0	77.3	P/P	51 - 119
Flumioxazin	161	149	P/P	70 - 200

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P385760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fonofos	112	105	P/P	60 - 120
Hexazinone	117	106	P/P	57 - 142
Imazalil	102	92.7	P/P	50 - 150
Malathion	126	116	P/P	67 - 128
Metalaxyl	111	102	P/P	21 - 148
Metolachlor	97.8	92.9	P/P	70 - 120
Metribuzin	143	134	P/P	20 - 253
Mevinphos	103	99.9	P/P	47 - 116
Molinate	85.1	82.9	P/P	41 - 99.0
Naled	68.6	64.4	P/P	40 - 130
Norflurazon	107	102	P/P	54 - 127
Oxadiazon	98.9	91.5	P/P	65 - 122
Parathion Ethyl	108	102	P/P	71 - 113
Parathion Methyl	126	117	P/P	73 - 129
Pendimethalin	89.1	84.0	P/P	63 - 130
Phorate	92.2	91.8	P/P	48 - 118
Prodiamine	36.1	32.2	P/P	20 - 144
Prometon	108	95.7	P/P	53 - 120
Prometryn	114	103	P/P	63 - 119
Pronamide	113	115	P/P	50 - 150
Propiconazole	100	92.1	P/P	50 - 150
Simazine	118	116	P/P	77 - 129
Sulfentrazone	46.6	42.1	F/F	50 - 150
Tebuconazole	25.4	24.2	P/P	20 - 118
Terbufos	116	112	P/P	61 - 119
Terbutylazine	110	99.8	P/P	75 - 119

Reference Method: EPA 8276
Batch ID: P385657

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	95.6	P/P	47 - 119
Toxaphene	64.4	62.8	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P385679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	120		P	30 - 160
Acetaminophen	77.9		P	30 - 160
Acetamiprid	78.1		P	30 - 160
Afidopyropen	61.1		P	30 - 160
Bentazon	49.7		P	30 - 160
Benzovindiflupyr	73.2		P	30 - 160
Carbamazepine	58.5		P	30 - 160
Clothianidin	80.5		P	30 - 160
Dinotefuran	93.4		P	30 - 160
Diuron	51.1		P	30 - 160
Fenuron	96.7		P	30 - 160
Fluridone	82.1		P	30 - 160
Hydrocodone	85.4		P	30 - 160
Ibuprofen	76.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
 Batch ID: P385679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazapyr	88.0		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	70.4		P	30 - 160
Mandestrobin	83.5		P	30 - 160
MCPP	120		P	30 - 160
Naproxen	78.6		P	30 - 160
Primidone	73.2		P	30 - 160
Pyraclostrobin	76.6		P	30 - 160
Thiamethoxam	71.4		P	30 - 160
Tolfenpyrad	56.2		P	30 - 160
Triclopyr	86.6		P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P385723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	113		P	40 - 150
AMPA	95.9		P	40 - 150
Endothall	97.0		P	40 - 150
Glufosinate	82.7		P	40 - 150
Glyphosate	79.2		P	40 - 140
Sucralose	97.9		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P385828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	30 - 160
3-Hydroxycarbofuran	86.2		P	30 - 160
Acetaminophen	71.5		P	30 - 160
Acetamiprid	70.2		P	30 - 160
Afidopyropen	55.5		P	30 - 160
Aldicarb	63.7		P	30 - 160
Aldicarb Sulfone	91.8		P	30 - 160
Aldicarb Sulfoxide	98.5		P	30 - 160
Bentazon	67.4		P	30 - 160
Benzovindiflupyr	84.5		P	30 - 160
Carbamazepine	54.6		P	30 - 160
Carbaryl	45.4		P	30 - 160
Carbofuran	47.6		P	30 - 160
Clothianidin	67.8		P	30 - 160
Dinotefuran	92.3		P	30 - 160
Diuron	51.4		P	30 - 160
Fenuron	101		P	30 - 160
Fluridone	82.7		P	30 - 160
Hydrocodone	90.0		P	30 - 160
Ibuprofen	66.5		P	30 - 160
Imazapyr	73.8		P	30 - 160
Imidacloprid	88.8		P	30 - 160
Linuron	65.7		P	30 - 160
Mandestrobin	94.7		P	30 - 160
MCPP	107		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P385828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methiocarb	49.4		P	30 - 160
Methomyl	97.2		P	30 - 160
Naproxen	76.6		P	30 - 160
Oxamyl	88.6		P	30 - 160
Primidone	67.5		P	30 - 160
Propoxur	42.5		P	30 - 160
Pyraclostrobin	79.9		P	30 - 160
Thiamethoxam	56.4		P	30 - 160
Tolfenpyrad	48.2		P	30 - 160
Triclopyr	86.5		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P385746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P385833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385883

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385736

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189012	Barium	106	104	P/P	80 - 120
2189012	Calcium	105	105	P/P	80 - 120
2189012	Iron	105	101	P/P	80 - 120
2189012	Magnesium	104	101	P/P	80 - 120
2189012	Potassium	101	98.6	P/P	80 - 120
2189012	Sodium	97.7	101	P/P	80 - 120
2189012	Zinc	109	107	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385736

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189012	Aluminum	100	99.2	P/P	80 - 120
2189012	Antimony	103	104	P/P	80 - 120
2189012	Arsenic	101	100	P/P	80 - 120
2189012	Beryllium	102	102	P/P	80 - 120
2189012	Boron	103	102	P/P	80 - 120
2189012	Cadmium	99.3	101	P/P	80 - 120
2189012	Chromium	103	102	P/P	80 - 120
2189012	Cobalt	101	101	P/P	80 - 120
2189012	Copper	98.9	99.5	P/P	80 - 120
2189012	Lead	105	105	P/P	80 - 120
2189012	Manganese	101	100	P/P	80 - 120
2189012	Molybdenum	99.0	99.6	P/P	80 - 120
2189012	Nickel	97.4	97.2	P/P	80 - 120
2189012	Selenium	97.6	98.5	P/P	80 - 120
2189012	Silver	109	109	P/P	80 - 120
2189012	Thallium	101	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188987	Chloride	102		P	90 - 110
2189101	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188987	Sulfate	103		P	90 - 110
2189101	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385807

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188988	Ammonia-N	99.0	97.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P386128

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188991	Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P385881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189045	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188898	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189025	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385827

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188920	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188910	O-Phosphate-P	98.9	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189046	O-Phosphate-P	98.6	99.1	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P385657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188145	Aldrin	61.7	54.9	P/P	32 - 82.0
2188145	Alpha-BHC	86.8	79.7	P/P	68 - 157
2188145	Alpha-Chlordane	79.4	67.9	P/P	54 - 108
2188145	Beta-BHC	103	82.6	P/P	54 - 200
2188145	Beta-Cyfluthrin	87.5	80.1	P/P	50 - 154
2188145	Bifenthrin	74.6	67.6	P/P	49 - 124
2188145	Chlorothalonil	48.8	67.8	P/P	10 - 289
2188145	Cis-Nonachlor	78.6	66.8	P/P	53 - 112
2188145	Cypermethrin	70.0	60.5	P/P	43 - 141
2188145	Dacthal	93.8	82.5	P/P	75 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P385657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188145	DDD-p,p'	85.1	72.2	P/P	58 - 125
2188145	DDE-p,p'	77.7	63.9	P/P	50 - 108
2188145	DDT-p,p'	84.9	78.8	P/P	52 - 140
2188145	Delta-BHC	127	105	P/P	61 - 228
2188145	Deltamethrin	58.6	53.3	P/P	50 - 200
2188145	Dicofol	80.4	82.6	P/P	59 - 130
2188145	Dieldrin	87.9	73.5	P/P	57 - 121
2188145	Endosulfan I	95.7	84.9	P/P	62 - 123
2188145	Endosulfan II	97.5	83.7	P/P	48 - 163
2188145	Endosulfan Sulfate	85.3	80.3	P/P	63 - 132
2188145	Endrin	92.5	73.4	P/P	58 - 128
2188145	Endrin Aldehyde	55.5	39.6	P/F	44 - 126
2188145	Endrin Ketone	105	90.1	P/P	68 - 127
2188145	Ethalfuralin	85.5	76.9	P/P	55 - 131
2188145	Gamma-BHC	103	93.7	P/P	54 - 206
2188145	Gamma-Chlordane	77.8	66.3	P/P	52 - 105
2188145	Heptachlor	61.9	57.7	P/P	47 - 94.0
2188145	Heptachlor Epoxide	84.7	73.6	P/P	61 - 113
2188145	Hexachlorobenzene	56.9	51.8	P/P	45 - 100
2188145	Lambda-Cyhalothrin	76.0	68.3	P/P	37 - 165
2188145	Methoxychlor	89.3	80.3	P/P	63 - 153
2188145	Mirex	64.8	56.7	P/P	38 - 90.0
2188145	Permethrin	65.9	57.3	P/P	45 - 112
2188145	Phenothrin	64.9	56.0	P/P	22 - 118
2188145	Prallethrin	73.1	58.5	P/P	21 - 114
2188145	Trans-Nonachlor	76.3	60.1	P/P	50 - 103
2188145	Trifluralin	82.3	72.0	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P385760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188424	Acetochlor	104	95.7	P/P	68 - 126
2188424	Alachlor	96.0	86.6	P/P	66 - 125
2188424	Ametryn	96.4	98.1	P/P	31 - 182
2188424	Atrazine Desethyl	85.4	84.7	P/P	13 - 161
2188424	Azinphos Methyl	81.0	78.8	P/P	54 - 162
2188424	Bromacil	123	109	P/P	34 - 144
2188424	Butylate	73.2	65.9	P/P	16 - 92.0
2188424	Carbophenothion	68.2	63.7	P/P	50 - 150
2188424	Chlorpyrifos Ethyl	87.7	88.1	P/P	63 - 124
2188424	Chlorpyrifos Methyl	89.6	81.9	P/P	64 - 125
2188424	Cyanazine	65.8	61.2	P/P	13 - 245
2188424	Demeton	109	98.6	P/P	20 - 154
2188424	Diazinon	126	114	P/P	66 - 141
2188424	Dimethenamid	68.3	64.6	P/P	50 - 130
2188424	Disulfoton	91.6	87.7	P/P	55 - 130
2188424	Dithiopyr	92.8	82.1	P/P	66 - 122
2188424	EPTC	70.5	64.2	P/P	15 - 93.0
2188424	Ethion	17.4	16.7	P/P	15 - 148
2188424	Ethoprop	134	125	F/P	59 - 126
2188424	Fenamiphos	46.7	55.9	P/P	39 - 137

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P385760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188424	Fipronil	90.3	82.2	P/P	47 - 131
2188424	Fipronil Desulfinyl	99.6	81.6	P/P	43 - 121
2188424	Fipronil Sulfide	67.7	58.3	P/P	29 - 134
2188424	Flumioxazin	233	219	F/F	70 - 200
2188424	Fonofos	117	103	P/P	62 - 128
2188424	Hexazinone	143	124	P/P	58 - 154
2188424	Imazalil	134	129	P/P	50 - 150
2188424	Malathion	115	103	P/P	54 - 135
2188424	Metalaxyl	98.0	85.8	P/P	46 - 136
2188424	Metolachlor	79.4	71.4	P/P	62 - 126
2188424	Metribuzin	115	108	P/P	44 - 277
2188424	Mevinphos	128	120	P/P	44 - 135
2188424	Molinate	87.1	79.1	P/P	31 - 104
2188424	Naled	63.4	58.6	P/P	40 - 130
2188424	Norflurazon	83.4	78.1	P/P	32 - 134
2188424	Parathion Ethyl	112	103	P/P	67 - 120
2188424	Parathion Methyl	138	138	P/P	70 - 140
2188424	Pendimethalin	102	94.1	P/P	59 - 145
2188424	Phorate	124	111	P/P	52 - 127
2188424	Prodiamine	41.8	38.3	P/P	11 - 157
2188424	Prometon	98.1	85.9	P/P	55 - 130
2188424	Prometryn	109	97.9	P/P	55 - 127
2188424	Pronamide	132	119	P/P	50 - 150
2188424	Simazine	134	106	P/P	58 - 159
2188424	Sulfentrazone	62.9	59.2	P/P	50 - 150
2188424	Tebuconazole	3.07	2.31	F/F	10 - 122
2188424	Terbufos	141	125	F/P	65 - 131
2188424	Terbutylazine	118	106	P/P	63 - 131

Reference Method: EPA 8276
 Batch ID: P385657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189285	Chlordane	93.3	98.7	P/P	34 - 129
2189285	Toxaphene	57.3	52.7	P/P	26 - 123

Reference Method: EPA 8321B
 Batch ID: P385679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188520	2,4-D	105	116	P/P	30 - 160
2188520	Acetaminophen	64.0	65.2	P/P	30 - 160
2188520	Acetamiprid	56.6	64.0	P/P	30 - 160
2188520	Afidopyropen	53.5	55.6	P/P	30 - 160
2188520	Benzovindiflupyr	60.4	58.7	P/P	30 - 160
2188520	Carbamazepine	41.7	43.2	P/P	30 - 160
2188520	Clothianidin	53.7	51.9	P/P	30 - 160
2188520	Dinotefuran	69.7	70.9	P/P	30 - 160
2188520	Diuron	38.2	40.3	P/P	30 - 160
2188520	Fenuron	67.2	71.1	P/P	30 - 160
2188520	Fluridone	52.0	63.6	P/P	30 - 160
2188520	Hydrocodone	58.1	62.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188520	Ibuprofen	69.3	62.5	P/P	30 - 160
2188520	Imidacloprid	90.7	87.7	P/P	30 - 160
2188520	Linuron	51.3	58.5	P/P	30 - 160
2188520	Mandestrobin	72.6	75.3	P/P	30 - 160
2188520	MCCP	101	98.4	P/P	30 - 160
2188520	Naproxen	61.3	71.5	P/P	30 - 160
2188520	Primidone	61.5	64.1	P/P	30 - 160
2188520	Pyraclostrobin	72.1	71.5	P/P	30 - 160
2188520	Thiamethoxam	56.7	59.5	P/P	30 - 160
2188520	Tolfenpyrad	52.7	55.5	P/P	30 - 160
2188520	Triclopyr	89.1	95.2	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P385723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189008	Acesulfame K	119	117	P/P	40 - 150
2189008	AMPA	115	115	P/P	40 - 150
2189008	Endothall	111	112	P/P	40 - 150
2189008	Glufosinate	93.3	92.3	P/P	40 - 150
2189008	Glyphosate	64.6	75.0	P/P	40 - 140
2189008	Sucralose	59.2	57.1	P/P	40 - 150

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
2189009	2,4-D	119	111	P/P	30 - 160
2189009	Acetaminophen	89.0	82.7	P/P	30 - 160
2189009	Acetamiprid	67.6	66.7	P/P	30 - 160
2189009	Afidopyropen	51.2	47.7	P/P	30 - 160
2189009	Bentazon	61.9	49.0	P/P	30 - 160
2189009	Benzovindiflupyr	75.5	73.5	P/P	30 - 160
2189009	Carbamazepine	49.2	47.9	P/P	30 - 160
2189009	Clothianidin	59.5	60.9	P/P	30 - 160
2189009	Dinotefuran	89.2	91.0	P/P	30 - 160
2189009	Diuron	44.6	43.1	P/P	30 - 160
2189009	Fenuron	89.9	88.5	P/P	30 - 160
2189009	Fluridone	79.9	77.8	P/P	30 - 160
2189009	Hydrocodone	84.7	88.7	P/P	30 - 160
2189009	Ibuprofen	63.6	58.2	P/P	30 - 160
2189009	Imazapyr	95.3	76.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189009	Imidacloprid	96.4	101	P/P	30 - 160
2189009	Linuron	61.6	55.7	P/P	30 - 160
2189009	Mandestrobin	78.4	79.6	P/P	30 - 160
2189009	MCP	99.0	97.1	P/P	30 - 160
2189009	Naproxen	61.1	59.5	P/P	30 - 160
2189009	Primidone	65.4	66.6	P/P	30 - 160
2189009	Pyraclostrobin	70.5	73.2	P/P	30 - 160
2189009	Thiamethoxam	77.0	80.7	P/P	30 - 160
2189009	Tolfenpyrad	45.0	45.0	P/P	30 - 160
2189009	Triclopyr	86.0	91.3	P/P	30 - 160

Reference Method: SM 5310 B-2011
Batch ID: P385883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188901	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188778	Turbidity	2.17	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188990	Turbidity	4.61	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189012	Barium	1.60	Spike	P	0 - 20
2189012	Calcium	0.0287	Spike	P	0 - 20
2189012	Iron	3.45	Spike	P	0 - 20
2189012	Magnesium	2.15	Spike	P	0 - 20
2189012	Potassium	2.17	Spike	P	0 - 20
2189012	Sodium	1.94	Spike	P	0 - 20
2189012	Zinc	1.49	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189012	Aluminum	1.08	Spike	P	0 - 20
2189012	Antimony	1.14	Spike	P	0 - 20
2189012	Arsenic	0.413	Spike	P	0 - 20
2189012	Beryllium	0.0887	Spike	P	0 - 20
2189012	Boron	0.384	Spike	P	0 - 20
2189012	Cadmium	1.43	Spike	P	0 - 20
2189012	Chromium	0.316	Spike	P	0 - 20
2189012	Cobalt	0.00661	Spike	P	0 - 20
2189012	Copper	0.664	Spike	P	0 - 20
2189012	Lead	0.439	Spike	P	0 - 20
2189012	Manganese	0.404	Spike	P	0 - 20
2189012	Molybdenum	0.694	Spike	P	0 - 20
2189012	Nickel	0.264	Spike	P	0 - 20
2189012	Selenium	0.868	Spike	P	0 - 20
2189012	Silver	0.659	Spike	P	0 - 20
2189012	Thallium	1.06	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188987	Chloride	0.277	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188987	Sulfate	0.935	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188988	Ammonia-N	1.85	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188991	Ammonia-N	1.30	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189045	Kjeldahl Nitrogen	2.16	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188898	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189025	NO2NO3-N	0.275	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188920	Total-P	0.0460	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188910	O-Phosphate-P	0.303	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189046	O-Phosphate-P	0.461	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P385657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188145	Aldrin	11.5	Spike	P	0 - 30
2188145	Alpha-BHC	8.53	Spike	P	0 - 30
2188145	Alpha-Chlordane	15.7	Spike	P	0 - 30
2188145	Beta-BHC	21.6	Spike	P	0 - 30
2188145	Beta-Cyfluthrin	8.86	Spike	P	0 - 30
2188145	Bifenthrin	9.77	Spike	P	0 - 30
2188145	Chlorothalonil	32.7	Spike	F	0 - 30
2188145	Cis-Nonachlor	16.1	Spike	P	0 - 30
2188145	Cypermethrin	14.5	Spike	P	0 - 30
2188145	Dacthal	12.8	Spike	P	0 - 30
2188145	DDD-p,p'	16.4	Spike	P	0 - 30
2188145	DDE-p,p'	19.5	Spike	P	0 - 30
2188145	DDT-p,p'	7.40	Spike	P	0 - 30
2188145	Delta-BHC	19.6	Spike	P	0 - 30
2188145	Deltamethrin	9.49	Spike	P	0 - 30
2188145	Dicofol	2.75	Spike	P	0 - 30
2188145	Dieldrin	17.8	Spike	P	0 - 30
2188145	Endosulfan I	11.9	Spike	P	0 - 30
2188145	Endosulfan II	15.2	Spike	P	0 - 30
2188145	Endosulfan Sulfate	6.06	Spike	P	0 - 30
2188145	Endrin	23.0	Spike	P	0 - 30
2188145	Endrin Aldehyde	33.3	Spike	F	0 - 30
2188145	Endrin Ketone	15.6	Spike	P	0 - 30
2188145	Ethalfuralin	10.7	Spike	P	0 - 30
2188145	Gamma-BHC	9.40	Spike	P	0 - 30
2188145	Gamma-Chlordane	16.0	Spike	P	0 - 30
2188145	Heptachlor	7.00	Spike	P	0 - 30
2188145	Heptachlor Epoxide	14.0	Spike	P	0 - 30
2188145	Hexachlorobenzene	9.36	Spike	P	0 - 30
2188145	Lambda-Cyhalothrin	10.7	Spike	P	0 - 30
2188145	Methoxychlor	10.5	Spike	P	0 - 30
2188145	Mirex	13.3	Spike	P	0 - 30
2188145	Permethrin	13.9	Spike	P	0 - 30
2188145	Phenothrin	14.8	Spike	P	0 - 30
2188145	Prallethrin	22.2	Spike	P	0 - 30
2188145	Trans-Nonachlor	23.9	Spike	P	0 - 30
2188145	Trifluralin	13.3	Spike	P	0 - 30
LFB	Aldrin	8.71	LCS	P	0 - 30
LFB	Alpha-BHC	0.873	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.22	LCS	P	0 - 30
LFB	Beta-BHC	2.86	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	4.96	LCS	P	0 - 30
LFB	Bifenthrin	0.969	LCS	P	0 - 30
LFB	Chlorothalonil	27.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P385657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Cis-Nonachlor	4.02	LCS	P	0 - 30
LFB	Cypermethrin	0.437	LCS	P	0 - 30
LFB	Dacthal	5.92	LCS	P	0 - 30
LFB	DDD-p,p'	5.88	LCS	P	0 - 30
LFB	DDE-p,p'	5.93	LCS	P	0 - 30
LFB	DDT-p,p'	0.850	LCS	P	0 - 30
LFB	Delta-BHC	1.24	LCS	P	0 - 30
LFB	Deltamethrin	0.409	LCS	P	0 - 30
LFB	Dicofol	0.877	LCS	P	0 - 30
LFB	Dieldrin	5.89	LCS	P	0 - 30
LFB	Endosulfan I	7.75	LCS	P	0 - 30
LFB	Endosulfan II	2.77	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.971	LCS	P	0 - 30
LFB	Endrin	6.68	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.22	LCS	P	0 - 30
LFB	Endrin Ketone	1.22	LCS	P	0 - 30
LFB	Ethalfuralin	4.44	LCS	P	0 - 30
LFB	Gamma-BHC	2.96	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.75	LCS	P	0 - 30
LFB	Heptachlor	4.42	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.85	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.18	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.28	LCS	P	0 - 30
LFB	Methoxychlor	1.79	LCS	P	0 - 30
LFB	Mirex	3.40	LCS	P	0 - 30
LFB	Permethrin	1.71	LCS	P	0 - 30
LFB	Phenothrin	6.66	LCS	P	0 - 30
LFB	Prallethrin	14.1	LCS	P	0 - 30
LFB	Trans-Nonachlor	4.77	LCS	P	0 - 30
LFB	Trifluralin	2.70	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P385760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188424	Acetochlor	8.37	Spike	P	0 - 30
2188424	Alachlor	10.3	Spike	P	0 - 30
2188424	Ametryn	1.35	Spike	P	0 - 30
2188424	Atrazine	8.62	Spike	P	0 - 30
2188424	Atrazine Desethyl	0.701	Spike	P	0 - 30
2188424	Azinphos Methyl	2.82	Spike	P	0 - 30
2188424	Bromacil	12.2	Spike	P	0 - 30
2188424	Butylate	10.4	Spike	P	0 - 30
2188424	Carbophenothion	6.86	Spike	P	0 - 30
2188424	Chlorpyrifos Ethyl	0.440	Spike	P	0 - 30
2188424	Chlorpyrifos Methyl	9.00	Spike	P	0 - 30
2188424	Cyanazine	7.19	Spike	P	0 - 30
2188424	Demeton	10.1	Spike	P	0 - 30
2188424	Diazinon	9.82	Spike	P	0 - 30
2188424	Dimethenamid	5.51	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P385760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188424	Disulfoton	4.31	Spike	P	0 - 30
2188424	Dithiopyr	11.1	Spike	P	0 - 30
2188424	EPTC	9.30	Spike	P	0 - 30
2188424	Ethion	3.88	Spike	P	0 - 30
2188424	Ethoprop	7.54	Spike	P	0 - 30
2188424	Fenamiphos	17.8	Spike	P	0 - 30
2188424	Fipronil	6.11	Spike	P	0 - 30
2188424	Fipronil Desulfinyl	10.7	Spike	P	0 - 30
2188424	Fipronil Sulfide	7.05	Spike	P	0 - 30
2188424	Fipronil Sulfone	5.45	Spike	P	0 - 30
2188424	Flumioxazin	6.09	Spike	P	0 - 30
2188424	Fonofos	13.0	Spike	P	0 - 30
2188424	Hexazinone	13.1	Spike	P	0 - 30
2188424	Imazalil	3.16	Spike	P	0 - 30
2188424	Malathion	11.1	Spike	P	0 - 30
2188424	Metalaxyl	12.4	Spike	P	0 - 30
2188424	Metolachlor	7.99	Spike	P	0 - 30
2188424	Metribuzin	5.95	Spike	P	0 - 30
2188424	Mevinphos	6.58	Spike	P	0 - 30
2188424	Molinate	9.70	Spike	P	0 - 30
2188424	Naled	7.86	Spike	P	0 - 30
2188424	Norflurazon	6.64	Spike	P	0 - 30
2188424	Oxadiazon	4.44	Spike	P	0 - 30
2188424	Parathion Ethyl	8.21	Spike	P	0 - 30
2188424	Parathion Methyl	0.214	Spike	P	0 - 30
2188424	Pendimethalin	7.61	Spike	P	0 - 30
2188424	Phorate	10.8	Spike	P	0 - 30
2188424	Prodiamine	8.87	Spike	P	0 - 30
2188424	Prometon	11.7	Spike	P	0 - 30
2188424	Prometryn	10.5	Spike	P	0 - 30
2188424	Pronamide	10.5	Spike	P	0 - 30
2188424	Propiconazole	9.96	Spike	P	0 - 30
2188424	Simazine	18.6	Spike	P	0 - 30
2188424	Sulfentrazone	4.13	Spike	P	0 - 30
2188424	Tebuconazole	3.00	Spike	P	0 - 30
2188424	Terbufos	12.0	Spike	P	0 - 30
2188424	Terbutylazine	10.9	Spike	P	0 - 30
LFB	Acetochlor	6.88	LCS	P	0 - 30
LFB	Alachlor	8.32	LCS	P	0 - 30
LFB	Ametryn	12.3	LCS	P	0 - 30
LFB	Atrazine	5.47	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.36	LCS	P	0 - 30
LFB	Azinphos Methyl	11.6	LCS	P	0 - 30
LFB	Bromacil	0.790	LCS	P	0 - 30
LFB	Butylate	3.84	LCS	P	0 - 30
LFB	Carbophenothion	8.38	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.19	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.80	LCS	P	0 - 30
LFB	Cyanazine	7.69	LCS	P	0 - 30
LFB	Demeton	9.82	LCS	P	0 - 30
LFB	Diazinon	5.74	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P385760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dimethenamid	5.87	LCS	P	0 - 30
LFB	Disulfoton	12.9	LCS	P	0 - 30
LFB	Dithiopyr	8.64	LCS	P	0 - 30
LFB	EPTC	4.47	LCS	P	0 - 30
LFB	Ethion	6.49	LCS	P	0 - 30
LFB	Ethoprop	5.50	LCS	P	0 - 30
LFB	Fenamiphos	15.5	LCS	P	0 - 30
LFB	Fipronil	6.93	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.76	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.48	LCS	P	0 - 30
LFB	Fipronil Sulfone	10.6	LCS	P	0 - 30
LFB	Flumioxazin	7.43	LCS	P	0 - 30
LFB	Fonofos	6.21	LCS	P	0 - 30
LFB	Hexazinone	9.85	LCS	P	0 - 30
LFB	Imazalil	9.64	LCS	P	0 - 30
LFB	Malathion	8.30	LCS	P	0 - 30
LFB	Metalaxyl	8.89	LCS	P	0 - 30
LFB	Metolachlor	5.12	LCS	P	0 - 30
LFB	Metribuzin	6.73	LCS	P	0 - 30
LFB	Mevinphos	3.20	LCS	P	0 - 30
LFB	Molinate	2.61	LCS	P	0 - 30
LFB	Naled	6.34	LCS	P	0 - 30
LFB	Norflurazon	5.15	LCS	P	0 - 30
LFB	Oxadiazon	7.81	LCS	P	0 - 30
LFB	Parathion Ethyl	6.07	LCS	P	0 - 30
LFB	Parathion Methyl	7.41	LCS	P	0 - 30
LFB	Pendimethalin	5.91	LCS	P	0 - 30
LFB	Phorate	0.440	LCS	P	0 - 30
LFB	Prodiamine	11.6	LCS	P	0 - 30
LFB	Prometon	12.0	LCS	P	0 - 30
LFB	Prometryn	10.4	LCS	P	0 - 30
LFB	Pronamide	1.66	LCS	P	0 - 30
LFB	Propiconazole	8.19	LCS	P	0 - 30
LFB	Simazine	1.85	LCS	P	0 - 30
LFB	Sulfentrazone	10.2	LCS	P	0 - 30
LFB	Tebuconazole	4.89	LCS	P	0 - 30
LFB	Terbufos	3.97	LCS	P	0 - 30
LFB	Terbutylazine	9.54	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P385657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189285	Chlordane	5.63	Spike	P	0 - 30
2189285	Toxaphene	8.39	Spike	P	0 - 30
LFB	Chlordane	7.02	LCS	P	0 - 30
LFB	Toxaphene	2.47	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P385679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188520	2,4-D	7.57	Spike	P	0 - 30
2188520	Acetaminophen	1.84	Spike	P	0 - 30
2188520	Acetamiprid	12.2	Spike	P	0 - 30
2188520	Afidopyropen	3.60	Spike	P	0 - 30
2188520	Bentazon	2.70	Spike	P	0 - 30
2188520	Benzovindiflupyr	2.99	Spike	P	0 - 30
2188520	Carbamazepine	2.94	Spike	P	0 - 30
2188520	Clothianidin	3.03	Spike	P	0 - 30
2188520	Dinotefuran	1.71	Spike	P	0 - 30
2188520	Diuron	4.74	Spike	P	0 - 30
2188520	Fenuron	5.65	Spike	P	0 - 30
2188520	Fluridone	9.19	Spike	P	0 - 30
2188520	Hydrocodone	7.06	Spike	P	0 - 30
2188520	Ibuprofen	10.3	Spike	P	0 - 30
2188520	Imazapyr	9.25	Spike	P	0 - 30
2188520	Imidacloprid	2.07	Spike	P	0 - 30
2188520	Linuron	13.1	Spike	P	0 - 30
2188520	Mandestrobin	3.64	Spike	P	0 - 30
2188520	MCPP	2.76	Spike	P	0 - 30
2188520	Naproxen	15.5	Spike	P	0 - 30
2188520	Primidone	3.65	Spike	P	0 - 30
2188520	Pyraclostrobin	0.835	Spike	P	0 - 30
2188520	Thiamethoxam	4.70	Spike	P	0 - 30
2188520	Tolfenpyrad	5.22	Spike	P	0 - 30
2188520	Triclopyr	6.55	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189008	Acesulfame K	1.30	Spike	P	0 - 30
2189008	AMPA	0.419	Spike	P	0 - 30
2189008	Endothall	1.08	Spike	P	0 - 30
2189008	Glufosinate	1.05	Spike	P	0 - 30
2189008	Glyphosate	14.9	Spike	P	0 - 30
2189008	Sucralose	3.50	Spike	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

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P385828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188553	Oxamyl	0.604	Spike	P	0 - 30
2188553	Propoxur	0.664	Spike	P	0 - 30
2189009	2,4-D	6.43	Spike	P	0 - 30
2189009	Acetaminophen	7.34	Spike	P	0 - 30
2189009	Acetamiprid	1.28	Spike	P	0 - 30
2189009	Afidopyropen	7.00	Spike	P	0 - 30
2189009	Bentazon	15.8	Spike	P	0 - 30
2189009	Benzovindiflupyr	2.65	Spike	P	0 - 30
2189009	Carbamazepine	2.77	Spike	P	0 - 30
2189009	Clothianidin	2.34	Spike	P	0 - 30
2189009	Dinotefuran	1.95	Spike	P	0 - 30
2189009	Diuron	3.51	Spike	P	0 - 30
2189009	Fenuron	1.60	Spike	P	0 - 30
2189009	Fluridone	2.67	Spike	P	0 - 30
2189009	Hydrocodone	4.56	Spike	P	0 - 30
2189009	Ibuprofen	8.90	Spike	P	0 - 30
2189009	Imazapyr	21.8	Spike	P	0 - 30
2189009	Imidacloprid	4.46	Spike	P	0 - 30
2189009	Linuron	10.1	Spike	P	0 - 30
2189009	Mandestrobin	1.53	Spike	P	0 - 30
2189009	MCPP	1.98	Spike	P	0 - 30
2189009	Naproxen	2.62	Spike	P	0 - 30
2189009	Primidone	1.82	Spike	P	0 - 30
2189009	Pyraclostrobin	3.79	Spike	P	0 - 30
2189009	Thiamethoxam	4.72	Spike	P	0 - 30
2189009	Tolfenpyrad	0.0506	Spike	P	0 - 30
2189009	Triclopyr	5.89	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P385746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188993	Color (true)	1.65	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P385833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188775	Total Alkalinity	0.0281	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P386384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189027	TDS	2.43	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P385836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188775	Fluoride	0.966	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188901	Organic Carbon	0.0306	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2189007
Field Sample ID: G4NW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	42.6	P	30 - 160

Lab Sample ID: 2189008
Field Sample ID: G4NW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.7	P	30 - 160
EPA 8321B	Diuron-d6	64.2	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	84.2	P	30 - 160
EPA 8321B	Sucralose-d6	56.5	P	30 - 160
EPA 8321B	Sucralose-d6	56.5	P	30 - 160

Lab Sample ID: 2189009
Field Sample ID: G4NW0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.3	P	30 - 160
EPA 8321B	Diuron-d6	53.2	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.2	P	30 - 160
EPA 8321B	Primidone-d5	71.6	P	30 - 160
EPA 8321B	Sucralose-d6	67.6	P	30 - 160
EPA 8321B	Sucralose-d6	67.6	P	30 - 160

Lab Sample ID: 2189010
Field Sample ID: G4NW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	44.7	P	44 - 112
EPA 8270E	Decachlorobiphenyl	54.2	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	32.4	F	34 - 106
EPA 8270E	Tetrachloro-m-xylene	35.6	P	34 - 106
EPA 8276	Decachlorobiphenyl	36.1	P	26 - 97.0
EPA 8276	Decachlorobiphenyl	19.9	F	26 - 97.0
EPA 8276	PCNB	59.2	P	38 - 141
EPA 8276	PCNB	55.6	P	38 - 141

Quality Assurance Report Surrogates

Lab Sample ID: 2189011
Field Sample ID: G4NW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	108	P	72 - 135
EPA 8270E	Terbufos-d10	101	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: 100407

Included Lab Sample IDs: 2189009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.5	104	P/P	50 - 150
Acetaminophen	123	131	P/P	60 - 160
Acetamiprid	102	123	P/P	50 - 150
Afidopyropen	97.5	107	P/P	50 - 150
Bentazon	138	77.6	P/P	50 - 160
Benzovindiflupyr	118	119	P/P	50 - 150
Carbamazepine	111	111	P/P	60 - 150
Clothianidin	115	106	P/P	60 - 150
Dinotefuran	105	114	P/P	50 - 150
Diuron	111	108	P/P	60 - 160
Fenuron	118	126	P/P	60 - 150
Fluridone	113	111	P/P	60 - 160
Hydrocodone	134	127	P/P	60 - 150
Ibuprofen	72.5	80.9	P/P	50 - 160
Imazapyr	104	98.3	P/P	50 - 150
Imidacloprid	105	105	P/P	60 - 150
Linuron	121	118	P/P	60 - 150
Mandestrobin	118	110	P/P	50 - 150
MCP	95.6	94.6	P/P	50 - 150
Naproxen	139	101	P/P	50 - 160
Primidone	92.8	97.6	P/P	60 - 150
Pyraclostrobin	113	103	P/P	60 - 150
Thiamethoxam	112	115	P/P	50 - 150
Tolfenpyrad	106	111	P/P	60 - 150
Triclopyr	88.0	90.9	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100321

Included Lab Sample IDs: 2188989, 2188992, 2188997, 2188998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	98.0	P/P	90 - 110
O-Phosphate-P	98.5	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100322

Included Lab Sample IDs: 2188987, 2188990, 2188993, 2188994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A100323

Included Lab Sample IDs: 2188987, 2188990, 2188993, 2188994

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100340

Included Lab Sample IDs: 2188988, 2188991, 2188995, 2188996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100346

Included Lab Sample IDs: 2189008, 2189009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	127	98.7	P/P	60 - 160
Acesulfame K	98.7	104	P/P	60 - 160
Endothall	111	103	P/P	60 - 160
Endothall	98.7	111	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100353

Included Lab Sample IDs: 2188988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	98.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100358

Included Lab Sample IDs: 2189012, 2189013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	106	106	P/P	90 - 110
Antimony	106	106	P/P	90 - 110
Arsenic	103	104	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110
Boron	106	107	P/P	90 - 110
Boron	107	107	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	103	104	P/P	90 - 110
Chromium	104	104	P/P	90 - 110
Cobalt	102	102	P/P	90 - 110
Cobalt	102	102	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	104	105	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Manganese	103	103	P/P	90 - 110
Manganese	103	103	P/P	90 - 110
Molybdenum	102	101	P/P	90 - 110
Molybdenum	102	102	P/P	90 - 110
Nickel	103	102	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Selenium	103	103	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Thallium	101	99.7	P/P	90 - 110
Thallium	99.8	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100361

Included Lab Sample IDs: 2189012, 2189013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	101	P/P	90 - 110
Calcium	102	102	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	99.2	99.6	P/P	90 - 110
Sodium	98.4	99.4	P/P	90 - 110
Zinc	105	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100371

Included Lab Sample IDs: 2188987, 2188990, 2188993, 2188994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100371

Included Lab Sample IDs: 2188987, 2188990, 2188993, 2188994

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100376

Included Lab Sample IDs: 2189012, 2189013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.6	97.4	P/P	90 - 110
Aluminum	97.4	98.3	P/P	90 - 110
Beryllium	95.9	98.5	P/P	90 - 110
Beryllium	98.5	96.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100385

Included Lab Sample IDs: 2188988, 2188991, 2188995, 2188996

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100386

Included Lab Sample IDs: 2188987, 2188990, 2188993, 2188994

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100390

Included Lab Sample IDs: 2189008, 2189009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.0	101	P/P	60 - 160
Sucralose	97.2	96.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100391

Included Lab Sample IDs: 2189008, 2189009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.3	107	P/P	60 - 160
AMPA	99.7	98.3	P/P	60 - 160
Glufosinate	90.5	91.3	P/P	60 - 160
Glufosinate	91.3	100	P/P	60 - 160
Glyphosate	97.3	99.7	P/P	60 - 160
Glyphosate	99.4	97.3	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100400

Included Lab Sample IDs: 2188988, 2188991, 2188995, 2188996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	95.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100407

Included Lab Sample IDs: 2189007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	108	115	P/P	60 - 150
Aldicarb	92.3	110	P/P	60 - 150
Aldicarb Sulfone	106	103	P/P	50 - 150
Aldicarb Sulfoxide	102	94.6	P/P	50 - 150
Carbaryl	121	113	P/P	60 - 150
Carbofuran	120	115	P/P	50 - 150
Methiocarb	123	117	P/P	50 - 150
Methomyl	98.7	102	P/P	50 - 150
Oxamyl	106	102	P/P	50 - 150
Propoxur	103	104	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A100410

Included Lab Sample IDs: 2189008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	114	118	P/P	50 - 150
Acetaminophen	102	107	P/P	60 - 160
Acetamiprid	127	121	P/P	50 - 150
Afidopyropen	106	105	P/P	50 - 150
Bentazon	150	113	P/P	50 - 160
Benzovindiflupyr	104	109	P/P	50 - 150
Carbamazepine	127	129	P/P	60 - 150
Clothianidin	102	112	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A100410
Included Lab Sample IDs: 2189008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinotefuran	102	106	P/P	50 - 150
Diuron	117	124	P/P	60 - 160
Fenuron	121	120	P/P	60 - 150
Fluridone	120	115	P/P	60 - 160
Hydrocodone	94.7	110	P/P	60 - 150
Ibuprofen	101	97.9	P/P	50 - 160
Imazapyr	112	112	P/P	50 - 150
Imidacloprid	97.9	121	P/P	60 - 150
Linuron	128	122	P/P	60 - 150
Mandestrobin	115	117	P/P	50 - 150
MCPP	111	112	P/P	50 - 150
Naproxen	116	97.4	P/P	50 - 160
Primidone	93.7	95.9	P/P	60 - 150
Pyraclostrobin	116	131	P/P	60 - 150
Thiamethoxam	104	108	P/P	50 - 150
Tolfenpyrad	116	134	P/P	60 - 150
Triclopyr	113	118	P/P	50 - 150

Reference Method: EPA 8276
Run ID: A100411
Included Lab Sample IDs: 2189010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.6		P	80 - 120
Toxaphene	79.8*		F	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A100416
Included Lab Sample IDs: 2188988, 2188991, 2188995, 2188996

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A100422
Included Lab Sample IDs: 2189012, 2189013

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

Reference Method: EPA 8270E
Run ID: A100457
Included Lab Sample IDs: 2189010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	96.5		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120
Beta-BHC	90.0		P	80 - 120
Beta-Cyfluthrin	91.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A100457
Included Lab Sample IDs: 2189010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bifenthrin	98.3		P	80 - 120
Chlorothalonil	117		P	80 - 120
Cis-Nonachlor	95.2		P	80 - 120
Cypermethrin	96.6		P	80 - 120
Dacthal	98.8		P	80 - 120
DDD-p,p'	95.5		P	80 - 120
DDE-p,p'	99.2		P	80 - 120
DDT-p,p'	111		P	80 - 120
Delta-BHC	90.8		P	80 - 120
Deltamethrin	105		P	80 - 120
Dicofol	94.0		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	100		P	80 - 120
Endosulfan Sulfate	95.5		P	80 - 120
Endrin	97.8		P	80 - 120
Endrin Aldehyde	101		P	80 - 120
Endrin Ketone	94.2		P	80 - 120
Ethalfuralin	98.7		P	80 - 120
Gamma-BHC	93.4		P	80 - 120
Gamma-Chlordane	97.8		P	80 - 120
Heptachlor	105		P	80 - 120
Heptachlor Epoxide	97.3		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Lambda-Cyhalothrin	96.1		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	88.8		P	80 - 120
Phenothrin	89.4		P	80 - 120
Prallethrin	88.5		P	80 - 120
Trans-Nonachlor	97.5		P	80 - 120
Trifluralin	98.6		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A100497
Included Lab Sample IDs: 2188991, 2188995, 2188996

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.4	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A100505
Included Lab Sample IDs: 2189011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	98.2		P	80 - 120
Atrazine	99.3		P	80 - 120
Atrazine Desethyl	83.4		P	80 - 120
Azinphos Methyl	96.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A100505
 Included Lab Sample IDs: 2189011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	100		P	80 - 120
Butylate	101		P	80 - 120
Carbophenothion	97.0		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	103		P	80 - 120
Cyanazine	88.5		P	80 - 120
Demeton	96.4		P	80 - 120
Diazinon	109		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	101		P	80 - 120
Dithiopyr	107		P	80 - 120
EPTC	101		P	80 - 120
Ethion	98.6		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	93.4		P	80 - 120
Fipronil	94.8		P	80 - 120
Fipronil Desulfinyl	95.0		P	80 - 120
Fipronil Sulfide	88.3		P	80 - 120
Fipronil Sulfone	88.9		P	80 - 120
Flumioxazin	84.3		P	80 - 120
Fonofos	104		P	80 - 120
Hexazinone	104		P	80 - 120
Imazalil	101		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	97.9		P	80 - 120
Metribuzin	98.9		P	80 - 120
Mevinphos	89.2		P	80 - 120
Molinate	99.9		P	80 - 120
Naled	102		P	80 - 120
Norflurazon	97.1		P	80 - 120
Oxadiazon	108		P	80 - 120
Parathion Ethyl	97.1		P	80 - 120
Parathion Methyl	94.3		P	80 - 120
Pendimethalin	102		P	80 - 120
Phorate	103		P	80 - 120
Prodiamine	95.3		P	80 - 120
Prometon	99.0		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	101		P	80 - 120
Propiconazole	103		P	80 - 120
Simazine	105		P	80 - 120
Sulfentrazone	87.5		P	80 - 120
Tebuconazole	98.3		P	80 - 120
Terbufos	103		P	80 - 120
Terbuthylazine	102		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	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						2.17	
	Turbidity						4.61	
EPA 200.7 Rev. 4.4	Barium	101		106	104			1.60
	Calcium	104		105	105			0.0287
	Iron	102		105	101			3.45
	Magnesium	103		104	101			2.15
	Potassium	100		101	98.6			2.17
	Sodium	98.1		97.7	101			1.94
	Zinc	105		109	107			1.49
EPA 200.8 Rev. 5.4	Aluminum	99.8		100	99.2			1.08
	Antimony	103		103	104			1.14
	Arsenic	101		101	100			0.413
	Beryllium	104		102	102			0.0887
	Boron	104		103	102			0.384
	Cadmium	102		99.3	101			1.43
	Chromium	102		103	102			0.316
	Cobalt	102		101	101			0.0066
	Copper	98.1		98.9	99.5			0.664
	Lead	105		105	105			0.439
	Manganese	99.2		101	100			0.404
	Molybdenum	98.4		99.0	99.6			0.694
	Nickel	98.3		97.4	97.2			0.264
	Selenium	99.3		97.6	98.5			0.868
	Silver	110		109	109			0.659
	Thallium	101		101	102			1.06
EPA 300.0 Rev. 2.1	Chloride	103		102	103		0.277	
	Sulfate	104		103	104		0.935	
EPA 350.1 Rev. 2.0	Ammonia-N	101		99.0	97.0			1.85
	Ammonia-N	97.4		100	98.8			1.30
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106		103	106			2.16
EPA 353.2 Rev. 2.0	NO2NO3-N	104		106	106			0.473
	NO2NO3-N	105		99.5	100			0.275
EPA 365.1 Rev. 2.0	Total-P	99.2		102	102			0.0460
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		98.9	99.2			0.303
	O-Phosphate-P	102		98.6	99.1			0.461
EPA 8270E	Acetochlor	116	109	104	95.7	6.88		8.37
	Alachlor	113	104	96.0	86.6	8.32		10.3
	Aldrin	57.2	52.4	61.7	54.9	8.71		11.5
	Alpha-BHC	86.4	87.2	86.8	79.7	0.873		8.53
	Alpha-Chlordane	90.6	86.9	79.4	67.9	4.22		15.7
	Ametryn	116	103	96.4	98.1	12.3		1.35
	Atrazine	117	110			5.47		8.62
	Atrazine Desethyl	97.1	88.5	85.4	84.7	9.36		0.701
	Azinphos Methyl	136	153	81.0	78.8	11.6		2.82
	Beta-BHC	96.3	99.0	103	82.6	2.86		21.6
	Beta-Cyfluthrin	88.8	84.5	87.5	80.1	4.96		8.86
	Bifenthrin	87.4	88.2	74.6	67.6	0.969		9.77
	Bromacil	115	116	123	109	0.790		12.2
	Butylate	72.8	75.7	73.2	65.9	3.84		10.4
	Carbophenothion	88.5	96.3	68.2	63.7	8.38		6.86
	Chlorothalonil	73.5	55.7	48.8	67.8	27.5		32.7
	Chlorpyrifos Ethyl	101	93.7	87.7	88.1	7.19		0.440
	Chlorpyrifos Methyl	109	102	89.6	81.9	6.80		9.00
	Cis-Nonachlor	92.3	88.7	78.6	66.8	4.02		16.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Cyanazine	148	137	65.8	61.2	7.69	7.19
	Cypermethrin	85.6	86.0	70.0	60.5	0.437	14.5
	Dacthal	99.8	94.1	93.8	82.5	5.92	12.8
	DDD-p,p'	101	95.7	85.1	72.2	5.88	16.4
	DDE-p,p'	90.3	85.1	77.7	63.9	5.93	19.5
	DDT-p,p'	96.7	97.5	84.9	78.8	0.850	7.40
	Delta-BHC	115	114	127	105	1.24	19.6
	Deltamethrin	100	100	58.6	53.3	0.409	9.49
	Demeton	81.1	73.5	109	98.6	9.82	10.1
	Diazinon	127	120	126	114	5.74	9.82
	Dicofol	98.3	99.2	80.4	82.6	0.877	2.75
	Dieldrin	96.4	90.9	87.9	73.5	5.89	17.8
	Dimethenamid	110	104	68.3	64.6	5.87	5.51
	Disulfoton	103	90.6	91.6	87.7	12.9	4.31
	Dithiopyr	108	98.9	92.8	82.1	8.64	11.1
	Endosulfan I	100	92.7	95.7	84.9	7.75	11.9
	Endosulfan II	117	114	97.5	83.7	2.77	15.2
	Endosulfan Sulfate	91.7	90.8	85.3	80.3	0.971	6.06
	Endrin	98.3	91.9	92.5	73.4	6.68	23.0
	Endrin Aldehyde	92.7	88.0	55.5	39.6	5.22	33.3
	Endrin Ketone	110	108	105	90.1	1.22	15.6
	EPTC	74.4	71.2	70.5	64.2	4.47	9.30
	Ethalfuralin	80.9	77.4	85.5	76.9	4.44	10.7
	Ethion	51.9	48.6	17.4	16.7	6.49	3.88
	Ethoprop	119	112	134	125	5.50	7.54
	Fenamiphos	81.8	70.0	46.7	55.9	15.5	17.8
	Fipronil	117	110	90.3	82.2	6.93	6.11
	Fipronil Desulfinyl	117	109	99.6	81.6	6.76	10.7
	Fipronil Sulfide	91.7	84.3	67.7	58.3	8.48	7.05
	Fipronil Sulfone	86.0	77.3			10.6	5.45
	Flumioxazin	161	149	233	219	7.43	6.09
	Fonofos	112	105	117	103	6.21	13.0
	Gamma-BHC	89.9	92.6	103	93.7	2.96	9.40
	Gamma-Chlordane	88.8	84.7	77.8	66.3	4.75	16.0
	Heptachlor	71.1	68.0	61.9	57.7	4.42	7.00
	Heptachlor Epoxide	91.5	87.2	84.7	73.6	4.85	14.0
	Hexachlorobenzene	68.3	69.8	56.9	51.8	2.18	9.36
	Hexazinone	117	106	143	124	9.85	13.1
	Imazalil	102	92.7	134	129	9.64	3.16
	Lambda-Cyhalothrin	85.8	86.9	76.0	68.3	1.28	10.7
	Malathion	126	116	115	103	8.30	11.1
	Metalaxyl	111	102	98.0	85.8	8.89	12.4
	Methoxychlor	98.6	100	89.3	80.3	1.79	10.5
	Metolachlor	97.8	92.9	79.4	71.4	5.12	7.99
	Metribuzin	143	134	115	108	6.73	5.95
	Mevinphos	103	99.9	128	120	3.20	6.58
	Mirex	76.8	74.2	64.8	56.7	3.40	13.3
	Molinate	85.1	82.9	87.1	79.1	2.61	9.70
	Naled	68.6	64.4	63.4	58.6	6.34	7.86
	Norflurazon	107	102	83.4	78.1	5.15	6.64
	Oxadiazon	98.9	91.5			7.81	4.44
	Parathion Ethyl	108	102	112	103	6.07	8.21
	Parathion Methyl	126	117	138	138	7.41	0.214
	Pendimethalin	89.1	84.0	102	94.1	5.91	7.61

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Permethrin	80.8	79.4	65.9	57.3	1.71		13.9
	Phenothrin	60.9	57.0	64.9	56.0	6.66		14.8
	Phorate	92.2	91.8	124	111	0.440		10.8
	Prallethrin	70.3	61.1	73.1	58.5	14.1		22.2
	Prodiamine	36.1	32.2	41.8	38.3	11.6		8.87
	Prometon	108	95.7	98.1	85.9	12.0		11.7
	Prometryn	114	103	109	97.9	10.4		10.5
	Pronamide	113	115	132	119	1.66		10.5
	Propiconazole	100	92.1			8.19		9.96
	Simazine	118	116	134	106	1.85		18.6
	Sulfentrazone	46.6	42.1	62.9	59.2	10.2		4.13
	Tebuconazole	25.4	24.2	3.07	2.31	4.89		3.00
	Terbufos	116	112	141	125	3.97		12.0
	Terbutylazine	110	99.8	118	106	9.54		10.9
	Trans-Nonachlor	89.0	84.9	76.3	60.1	4.77		23.9
	Trifluralin	79.9	77.8	82.3	72.0	2.70		13.3
	Chlordane	103	95.6	93.3	98.7	7.02		5.63
EPA 8276	Toxaphene	64.4	62.8	57.3	52.7	2.47		8.39
EPA 8321B	2,4-D	120		105	116			7.57
	2,4-D	115		119	111			6.43
	3-Hydroxycarbofuran	86.2		54.0	58.9			8.60
	Acesulfame K	113		119	117			1.30
	Acetaminophen	77.9		64.0	65.2			1.84
	Acetaminophen	71.5		89.0	82.7			7.34
	Acetamiprid	78.1		56.6	64.0			12.2
	Acetamiprid	70.2		67.6	66.7			1.28
	Afidopyropen	61.1		53.5	55.6			3.60
	Afidopyropen	55.5		51.2	47.7			7.00
	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	95.9		115	115			0.419
	Bentazon	49.7						2.70
	Bentazon	67.4		61.9	49.0			15.8
	Benzovindiflupyr	73.2		60.4	58.7			2.99
	Benzovindiflupyr	84.5		75.5	73.5			2.65
	Carbamazepine	58.5		41.7	43.2			2.94
	Carbamazepine	54.6		49.2	47.9			2.77
	Carbaryl	45.4		34.3	33.9			1.06
	Carbofuran	47.6		36.2	35.9			0.920
	Clothianidin	80.5		53.7	51.9			3.03
	Clothianidin	67.8		59.5	60.9			2.34
	Dinotefuran	93.4		69.7	70.9			1.71
	Dinotefuran	92.3		89.2	91.0			1.95
	Diuron	51.1		38.2	40.3			4.74
	Diuron	51.4		44.6	43.1			3.51
	Endothall	97.0		111	112			1.08
	Fenuron	96.7		67.2	71.1			5.65
	Fenuron	101		89.9	88.5			1.60
	Fluridone	82.1		52.0	63.6			9.19
	Fluridone	82.7		79.9	77.8			2.67
	Glufosinate	82.7		93.3	92.3			1.05
	Glyphosate	79.2		64.6	75.0			14.9
	Hydrocodone	85.4		58.1	62.3			7.06

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Hydrocodone	90.0	84.7	88.7			4.56
	Ibuprofen	76.5	69.3	62.5			10.3
	Ibuprofen	66.5	63.6	58.2			8.90
	Imazapyr	88.0					9.25
	Imazapyr	73.8	95.3	76.6			21.8
	Imidacloprid	103	90.7	87.7			2.07
	Imidacloprid	88.8	96.4	101			4.46
	Linuron	70.4	51.3	58.5			13.1
	Linuron	65.7	61.6	55.7			10.1
	Mandestrobin	83.5	72.6	75.3			3.64
	Mandestrobin	94.7	78.4	79.6			1.53
	MCPPP	120	101	98.4			2.76
	MCPPP	107	99.0	97.1			1.98
	Methiocarb	49.4	39.5	45.9			15.2
	Methomyl	97.2	70.6	73.5			4.02
	Naproxen	78.6	61.3	71.5			15.5
	Naproxen	76.6	61.1	59.5			2.62
	Oxamyl	88.6	67.0	66.6			0.604
	Primidone	73.2	61.5	64.1			3.65
	Primidone	67.5	65.4	66.6			1.82
	Propoxur	42.5	32.0	32.2			0.664
	Pyraclostrobin	76.6	72.1	71.5			0.835
	Pyraclostrobin	79.9	70.5	73.2			3.79
	Sucralose	97.9	59.2	57.1			3.50
	Thiamethoxam	71.4	56.7	59.5			4.70
	Thiamethoxam	56.4	77.0	80.7			4.72
	Tolfenpyrad	56.2	52.7	55.5			5.22
	Tolfenpyrad	48.2	45.0	45.0			0.0506
	Triclopyr	86.6	89.1	95.2			6.55
	Triclopyr	86.5	86.0	91.3			5.89
SM 2120 B-2011	Color (true)	102				1.65	
SM 2320 B-2011	Total Alkalinity	101				0.0281	
SM 2540 C-2011	TDS					2.43	
SM 4500 F-C-2011	Fluoride	98.4					0.966
SM 5310 B-2011	Organic Carbon	100	102	102			0.0306

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2188987, 2188990, 2188993, 2188994
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2189012, 2189013
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2189012, 2189013
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2188987, 2188990, 2188993, 2188994
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2188987, 2188990, 2188993, 2188994
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2188988, 2188991, 2188995, 2188996
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2188988, 2188991, 2188995, 2188996
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2188988, 2188991, 2188995, 2188996
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2188988, 2188991, 2188995, 2188996
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2188989, 2188992, 2188997, 2188998
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2189010

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2189011
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2189010
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2189007
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2189008, 2189009
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2189008, 2189009
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2188987, 2188990, 2188993, 2188994
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2188987, 2188990, 2188993, 2188994
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2189012, 2189013
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2188987, 2188990, 2188993, 2188994
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2188987, 2188990, 2188993, 2188994
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2188987, 2188990, 2188993, 2188994
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2188988, 2188991, 2188995, 2188996

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	08/06/2020			08/06/2020 16:18	Blanca Fach	2188987, 2188990, 2188993, 2188994
EPA 200.7 Rev. 4.4	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/07/2020 17:54	Betina Topolski	2189012
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/07/2020 18:20	Betina Topolski	2189013
EPA 200.8 Rev. 5.4	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/09/2020 17:57	Alexander Thompson	2189012
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/09/2020 19:12	Alexander Thompson	2189013
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/10/2020 14:24	Alexander Thompson	2189012
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/10/2020 15:12	Alexander Thompson	2189013
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/12/2020 16:37	Alexander Thompson	2189012
	08/06/2020	08/06/2020 16:25	Elliott D. Healy	08/12/2020 17:18	Alexander Thompson	2189013
EPA 300.0 Rev. 2.1	08/06/2020			08/08/2020 17:59	Julia Storbeck	2188987
	08/06/2020			08/08/2020 18:47	Julia Storbeck	2188990
	08/06/2020			08/08/2020 18:59	Julia Storbeck	2188993
	08/06/2020			08/08/2020 19:11	Julia Storbeck	2188994
EPA 350.1 Rev. 2.0	08/06/2020			08/08/2020 17:34	Ping Hua	2188988
	08/06/2020			08/12/2020 13:47	Virginia P. Brown	2188991
	08/06/2020			08/12/2020 13:51	Virginia P. Brown	2188995
	08/06/2020			08/12/2020 13:52	Virginia P. Brown	2188996
EPA 351.2 Rev. 2.0	08/06/2020	08/11/2020 08:40	Sima Feizi	08/12/2020 14:08	Jhamieka S. Greenwood	2188988
	08/06/2020	08/11/2020 08:40	Sima Feizi	08/12/2020 14:10	Jhamieka S. Greenwood	2188991
	08/06/2020	08/11/2020 08:40	Sima Feizi	08/12/2020 14:12	Jhamieka S. Greenwood	2188995
	08/06/2020	08/11/2020 08:40	Sima Feizi	08/12/2020 14:13	Jhamieka S. Greenwood	2188996
EPA 353.2 Rev. 2.0	08/06/2020			08/07/2020 10:41	Beverly Y. Sanders	2188988
	08/06/2020			08/07/2020 10:45	Beverly Y. Sanders	2188991
	08/06/2020			08/07/2020 10:50	Beverly Y. Sanders	2188995
	08/06/2020			08/07/2020 10:51	Beverly Y. Sanders	2188996
EPA 365.1 Rev. 2.0	08/06/2020	08/10/2020 11:00	Shengyu Wang	08/12/2020 08:19	Lipi Saha	2188988
	08/06/2020	08/10/2020 11:00	Shengyu Wang	08/12/2020 08:20	Lipi Saha	2188991
	08/06/2020	08/10/2020 11:00	Shengyu Wang	08/12/2020 08:21	Lipi Saha	2188995
	08/06/2020	08/10/2020 11:00	Shengyu Wang	08/12/2020 08:22	Lipi Saha	2188996
EPA 365.1 Rev. 2.0 dissolved	08/06/2020			08/06/2020 15:50	Samantha Davila	2188989
	08/06/2020			08/06/2020 15:51	Samantha Davila	2188992
	08/06/2020			08/06/2020 15:52	Samantha Davila	2188997
	08/06/2020			08/06/2020 16:01	Samantha Davila	2188998
EPA 8270E	08/06/2020	08/10/2020 08:00	Fe-Val Siddell	08/11/2020 21:40	Michael Poppell	2189010
	08/06/2020	08/10/2020 08:30	Rasheda Ghaffari	08/11/2020 21:44	Vandana T. Nagar	2189011
EPA 8276	08/06/2020	08/10/2020 08:00	Fe-Val Siddell	08/12/2020 07:14	Arthur Maknenko	2189010
EPA 8321B	08/06/2020	08/06/2020 13:00	Hoor Shaik	08/09/2020 13:32	Juyoung Kim	2189008
	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/06/2020 14:01	Rebecca Ware	2189008
	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/06/2020 15:05	Rebecca Ware	2189009
	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/07/2020 10:50	Rebecca Ware	2189008

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/07/2020 12:23	Rebecca Ware	2189009
	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/11/2020 05:00	Rebecca Ware	2189008
	08/06/2020	08/06/2020 13:00	Rebecca Ware	08/11/2020 06:11	Rebecca Ware	2189009
	08/06/2020	08/11/2020 09:00	Hoor Shaik	08/12/2020 10:24	Juyoung Kim	2189007
	08/06/2020	08/11/2020 09:00	Hoor Shaik	08/12/2020 14:26	Juyoung Kim	2189009
SM 2120 B-2011	08/06/2020			08/06/2020 16:06	Madeline Gruver	2188987
	08/06/2020			08/06/2020 16:07	Madeline Gruver	2188990
	08/06/2020			08/06/2020 16:08	Madeline Gruver	2188993
	08/06/2020			08/06/2020 16:09	Madeline Gruver	2188994
SM 2320 B-2011	08/06/2020			08/07/2020 17:42	Dale L. Simmons	2188987
	08/06/2020			08/07/2020 17:52	Dale L. Simmons	2188990
	08/06/2020			08/07/2020 18:03	Dale L. Simmons	2188993
	08/06/2020			08/07/2020 18:12	Dale L. Simmons	2188994
SM 2340B	08/06/2020			08/07/2020 17:54	Betina Topolski	2189012
	08/06/2020			08/07/2020 18:20	Betina Topolski	2189013
SM 2540 C-2011	08/06/2020			08/07/2020 17:33	Madeline Gruver	2188987, 2188990, 2188993, 2188994
SM 2540 D-2011	08/06/2020			08/07/2020 18:09	Madeline Gruver	2188987, 2188990, 2188993, 2188994
SM 4500 F-C-2011	08/06/2020			08/07/2020 17:42	Dale L. Simmons	2188987
	08/06/2020			08/07/2020 17:52	Dale L. Simmons	2188990
	08/06/2020			08/07/2020 18:03	Dale L. Simmons	2188993
	08/06/2020			08/07/2020 18:12	Dale L. Simmons	2188994
SM 5310 B-2011	08/06/2020			08/11/2020 01:27	David Boose	2188988
	08/06/2020			08/11/2020 01:39	David Boose	2188991
	08/06/2020			08/11/2020 01:51	David Boose	2188995
	08/06/2020			08/11/2020 02:03	David Boose	2188996