

Chemical Analysis Report

NW-DIST-2020-07-22-01

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

Event Description: **Holmes Run**
Request ID: **RQ-2020-07-20-55**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-AUG-2020 15:03

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Limestone Branch upstream of Mt. Ida Rd

Collection Date/Time: 07/21/2020 10:35

Field ID: G3NW0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184563	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P385058	
	EPA 300.0 Rev. 2.1	Chloride	4.3		mg Cl/L	P385318	
		Sulfate	2.3		mg SO4/L	P385322	
	SM 2120 B-2011	Color (true)	9.4	A	PCU	P385029	
	SM 2320 B-2011	Total Alkalinity	105	A	mg CaCO3/L	P385103	
	SM 2540 C-2011	TDS	128	A	mg/L	P385595	
	SM 2540 D-2011	TSS	2	IA	mg/L	P385590	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385106	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P385143	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P385056	
2184564	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P385049	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P385235	
	SM 5310 B-2011	Organic Carbon	1.4		mg C/L	P385262	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.006	I	mg P/L	P385013	
	dissolved						

Ref. Method and Comment:

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

Sample Location: East Pitman Creek upstream of HWY 179

Collection Date/Time: 07/21/2020 11:05

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184554	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P385058	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P385317	
		Sulfate	0.54		mg SO4/L	P385321	
		Color (true)	56		PCU	P385028	
	SM 2320 B-2011	Total Alkalinity	8.7		mg CaCO3/L	P385168	
	SM 2540 C-2011	TDS	46		mg/L	P385595	
	SM 2540 D-2011	TSS	3	I	mg/L	P385590	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385105	
2184557	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P385142	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P385056	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P385049	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P385235	
	SM 5310 B-2011	Organic Carbon	5.2		mg C/L	P385261	
2184560	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385013	
2184589	EPA 200.7 Rev. 4.4	Barium	24.3		ug/L	P385027	
		Calcium	4.95		mg/L	P385027	
		Iron	1.04E+03		ug/L	P385027	
		Magnesium	1.57		mg/L	P385027	
		Potassium	0.69	I	mg/L	P385027	
		Sodium	2.4		mg/L	P385027	
		Zinc	5.0	U	ug/L	P385027	
	EPA 200.8 Rev. 5.4	Aluminum	110		ug/L	P385027	
		Antimony	0.050	U	ug/L	P385027	
		Arsenic	0.50		ug/L	P385027	
		Boron**	8.7		ug/L	P385027	
		Cadmium	0.034	I	ug/L	P385027	
		Chromium	0.40	U	ug/L	P385027	
		Copper	0.40	U	ug/L	P385027	
		Lead	0.20	U	ug/L	P385027	
		Nickel	0.52	I	ug/L	P385027	
		Selenium	0.20	U	ug/L	P385027	
		Silver	0.010	U	ug/L	P385211	
		Thallium	0.10	U	ug/L	P385027	
	SM 2340B	Hardness	18.8		mg/L	P385027	

Ref. Method and Comment:

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

Sample Location: Wrights Creeek above Highway 177A

Collection Date/Time: 07/21/2020 11:35

Field ID: G3NW0444

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184579	EPA 8321B	2,4-D	0.0020	U	ug/L	P385007	
		Acesulfame K**	0.10	U	ug/L	P385009	
		AMPA**	0.10	U	ug/L	P385009	
		Sucralose**	0.017	I	ug/L	P385009	
		Acetaminophen**	0.0080	U	ug/L	P385007	
		Acetamiprid**	0.0020	U	ug/L	P385007	
		Endothall**	0.25	U	ug/L	P385009	
		Glufosinate**	0.10	U	ug/L	P385009	
		Glyphosate**	0.10	U	ug/L	P385009	
		Afidopyropen**	0.0020	U	ug/L	P385007	
		Bentazon	0.011		ug/L	P385007	
		Benzovindiflupyr**	0.0020	U	ug/L	P385007	
		Carbamazepine**	8.0E-04	U	ug/L	P385007	
		Clothianidin**	0.0020	U	ug/L	P385007	
		Dinotefuran**	0.0020	U	ug/L	P385007	
		Diuron	0.0020	U	ug/L	P385007	
		Fenuron	0.016	U	ug/L	P385007	
		Fluridone**	8.0E-04	U	ug/L	P385007	
		Imazapyr**	0.0095	I	ug/L	P385007	
		Hydrocodone**	0.0020	U	ug/L	P385007	
		Ibuprofen**	0.020	U	ug/L	P385007	
		Imidacloprid	0.0025	I	ug/L	P385007	
		Linuron	0.0040	U	ug/L	P385007	
		Mandestrobin**	0.0020	U	ug/L	P385007	
		MCPP	0.0020	U	ug/L	P385007	
		Naproxen**	0.0080	U	ug/L	P385007	
		Primidone**	0.0040	U	ug/L	P385007	
		Pyraclostrobin**	0.0020	U	ug/L	P385007	
		Thiamethoxam**	0.0020	U	ug/L	P385007	
		Tolfenpyrad**	0.0020	U	ug/L	P385007	
		Triclopyr**	0.0040	U	ug/L	P385007	

Sample Location: Sikes Creek upstream of Bonifay Gritney Rd

Collection Date/Time: 07/21/2020 12:00

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184551	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P385058	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P385317	
		Sulfate	0.41	I	mg SO4/L	P385321	
	SM 2120 B-2011	Color (true)	200		PCU	P385028	
	SM 2320 B-2011	Total Alkalinity	14		mg CaCO3/L	P385168	
	SM 2540 C-2011	TDS	82		mg/L	P385595	
	SM 2540 D-2011	TSS	9	I	mg/L	P385590	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385105	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P385142	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P385056	
2184552	EPA 353.2 Rev. 2.0	NO2NO3-N	0.095		mg N/L	P385048	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P385234	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P385261	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P385013	
	EPA 8321B	Aldicarb	0.020	U	ug/L	P385117	
2184553		Aldicarb Sulfone	0.0020	U	ug/L	P385117	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P385117	
		Carbaryl	0.0020	U	ug/L	P385117	
		Carbofuran	0.0020	U	ug/L	P385117	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P385117	
		Methiocarb	0.0020	U	ug/L	P385117	
		Methomyl	0.0020	U	ug/L	P385117	
		Oxamyl	0.0020	U	ug/L	P385117	
		Propoxur	0.0020	U	ug/L	P385117	
		2,4-D	0.0020	U	ug/L	P385007	
2184578		Acesulfame K**	0.10	U	ug/L	P385009	
		AMPA**	0.10	U	ug/L	P385009	
		Sucralose**	0.010	U	ug/L	P385009	
		Acetaminophen**	0.0080	U	ug/L	P385007	
		Acetamiprid**	0.0020	U	ug/L	P385007	
		Endothall**	0.25	U	ug/L	P385009	
		Glufosinate**	0.10	U	ug/L	P385009	
		Glyphosate**	0.10	U	ug/L	P385009	
		Afidopyrophen**	0.0020	U	ug/L	P385007	
		Bentazon	0.027		ug/L	P385007	
		Benzovindiflupyr**	0.0020	U	ug/L	P385007	
		Carbamazepine**	8.0E-04	U	ug/L	P385007	
		Clothianidin**	0.0020	U	ug/L	P385007	
		Dinotefuran**	0.0020	U	ug/L	P385007	
		Diuron	0.0020	U	ug/L	P385007	
		Fenuron	0.016	U	ug/L	P385007	
		Fluridone**	8.0E-04	U	ug/L	P385007	
		Imazapyr**	0.0041	I	ug/L	P385007	

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184578	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P385007	
		Ibuprofen**	0.020	U	ug/L	P385007	
		Imidacloprid	0.0020	U	ug/L	P385007	
		Linuron	0.0040	U	ug/L	P385007	
		Mandestrobin**	0.0020	U	ug/L	P385007	
		MCP	0.0020	U	ug/L	P385007	
		Naproxen**	0.0080	U	ug/L	P385007	
		Primidone**	0.0040	U	ug/L	P385007	
		Pyraclostrobin**	0.0020	U	ug/L	P385007	
		Thiamethoxam**	0.0020	U	ug/L	P385007	
		Tolfenpyrad**	0.0020	U	ug/L	P385007	
		Triclopyr**	0.0040	U	ug/L	P385007	
2184580	EPA 8270E	Aldrin	4.3	U	ng/L	P385155	
		Alpha-BHC	2.2	U	ng/L	P385155	
		Alpha-Chlordane	1.1	U	ng/L	P385155	
		Beta-BHC	8.6	U	ng/L	P385155	
		Beta-Cyfluthrin**	16	U	ng/L	P385155	
		Bifenthrin**	4.3	U	ng/L	P385155	
		Delta-BHC	8.6	U	ng/L	P385155	
		Gamma-BHC	8.6	U	ng/L	P385155	
		Chlorothalonil	2.2	U	ng/L	P385155	
		Cis-Nonachlor**	1.1	U	ng/L	P385155	
		Cypermethrin	22	U	ng/L	P385155	
		Dacthal**	1.1	U	ng/L	P385155	
		DDD-p,p'	5.4	U	ng/L	P385155	
		DDE-p,p'	5.4	U	ng/L	P385155	
		DDT-p,p'	6.5	U	ng/L	P385155	
		Dicofol	32	U	ng/L	P385155	
		Dieldrin	4.3	U	ng/L	P385155	
		Endosulfan I	4.3	U	ng/L	P385155	
		Endosulfan II	4.3	U	ng/L	P385155	
		Endosulfan Sulfate	2.2	U	ng/L	P385155	
		Endrin	2.2	U	ng/L	P385155	
		Endrin Aldehyde	2.2	U	ng/L	P385155	
		Endrin Ketone	2.2	U	ng/L	P385155	
		Ethalfuralin**	3.2	U	ng/L	P385155	
		Gamma-Chlordane	1.1	U	ng/L	P385155	
		Heptachlor	1.6	U	ng/L	P385155	
		Heptachlor Epoxide	2.2	U	ng/L	P385155	
		Hexachlorobenzene	2.2	U	ng/L	P385155	
		Lambda-Cyhalothrin**	16	U	ng/L	P385155	
		Methoxychlor	4.3	U	ng/L	P385155	
		Mirex	2.2	U	ng/L	P385155	
		Permethrin	11	U	ng/L	P385155	
		Phenothrin**	32	U	ng/L	P385155	

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184580	EPA 8270E	Prallethrin**	27	U	ng/L	P385155	
		Trans-Nonachlor**	1.1	U	ng/L	P385155	
		Trifluralin	2.7	U	ng/L	P385155	
		Chlordane	6.2	I	ng/L	P385155	
		Toxaphene	32	U	ng/L	P385155	
2184581	EPA 8270E	Acetochlor	0.26	U	ng/L	P384951	
		Alachlor	0.26	U	ng/L	P384951	
		Ametryn	0.63	U	ng/L	P384951	
		Atrazine	5.6		ng/L	P384951	
		Atrazine Desethyl	2.9	I	ng/L	P384951	
		Azinphos Methyl	2.1	U	ng/L	P384951	RPD
		Bromacil	0.52	U	ng/L	P384951	
		Butylate	0.42	U	ng/L	P384951	
		Carbophenothion	0.52	U	ng/L	P384951	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P384951	
		Chlorpyrifos Methyl	0.052	U	ng/L	P384951	
		Cyanazine	3.4	U	ng/L	P384951	
		Demeton	1.6	U	ng/L	P384951	
		Diazinon	0.13	U	ng/L	P384951	
		Dimethenamid**	0.20	I	ng/L	P384951	
		Disulfoton	0.52	U	ng/L	P384951	
		Dithiopyr**	0.10	U	ng/L	P384951	
		EPTC	1.3	U	ng/L	P384951	
		Ethion	0.16	U	ng/L	P384951	
		Ethoprop	0.10	U	ng/L	P384951	
		Fenamiphos	0.52	U	ng/L	P384951	
		Fipronil	0.26	U	ng/L	P384951	
		Fipronil Desulfinyl**	0.13	U	ng/L	P384951	
		Fipronil Sulfide	0.16	U	ng/L	P384951	
		Fipronil Sulfone	0.16	U	ng/L	P384951	
		Flumioxazin**	1.8	UJ	ng/L	P384951	LCS, MS
		Fonofos	0.21	U	ng/L	P384951	
		Hexazinone	0.52	U	ng/L	P384951	
		Imazalil**	0.78	U	ng/L	P384951	
		Malathion	0.37	U	ng/L	P384951	
		Metaxyl	0.78	U	ng/L	P384951	
		Metolachlor	5.4		ng/L	P384951	
		Metribuzin	3.4	U	ng/L	P384951	
		Mevinphos	0.52	U	ng/L	P384951	
		Molinate	0.31	U	ng/L	P384951	
		Naled**	1.6	U	ng/L	P384951	
		Norflurazon	0.52	U	ng/L	P384951	
		Oxadiazon	0.10	U	ng/L	P384951	
		Parathion Ethyl	0.26	U	ng/L	P384951	
		Parathion Methyl	0.57	U	ng/L	P384951	

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184581	EPA 8270E	Pendimethalin	1.0	UJ	ng/L	P384951	LCS
		Phorate	0.26	U	ng/L	P384951	
		Prodiamine**	0.18	U	ng/L	P384951	
		Prometon	0.94	U	ng/L	P384951	
		Prometryn	0.21	U	ng/L	P384951	
		Pronamide**	0.16	U	ng/L	P384951	
		Propiconazole**	0.52	U	ng/L	P384951	
		Simazine	0.52	U	ng/L	P384951	
		Sulfentrazone**	0.52	U	ng/L	P384951	
		Tebuconazole**	0.52	U	ng/L	P384951	
		Terbufos	0.10	U	ng/L	P384951	
		Terbuthylazine	0.44	U	ng/L	P384951	
2184588	EPA 200.7 Rev. 4.4	Barium	19.0		ug/L	P385027	
		Calcium	10.1		mg/L	P385027	
		Iron	1.27E+03		ug/L	P385027	
		Magnesium	1.01		mg/L	P385027	
		Potassium	0.42	I	mg/L	P385027	
		Sodium	1.8	I	mg/L	P385027	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P385027	
		Aluminum	432		ug/L	P385027	
		Antimony	0.050	U	ug/L	P385027	
		Arsenic	0.73		ug/L	P385027	
		Beryllium	0.053		ug/L	P385027	
		Boron**	11.0		ug/L	P385027	
		Cadmium	0.020	U	ug/L	P385027	
		Chromium	0.92	I	ug/L	P385027	
		Cobalt	0.599		ug/L	P385027	
		Copper	0.44	I	ug/L	P385027	
		Lead	0.99		ug/L	P385027	
		Manganese	83.6		ug/L	P385027	
		Molybdenum	0.15	U	ug/L	P385027	
		Nickel	0.63	I	ug/L	P385027	
		Selenium	0.20	U	ug/L	P385027	
		Silver	0.010	U	ug/L	P385211	
		Thallium	0.10	U	ug/L	P385027	
	SM 2340B	Hardness	29.5		mg/L	P385027	

Ref. Method and Comment:

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

EPA 8270E: Insufficient sample available to perform duplicate matrix spikes.

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 07/24/2020.

Sample Location: Choctawhatchee River upstream HWY 90 boat ramp **Collection Date/Time:** 07/21/2020 12:35

Field ID: G3NW0052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184555	EPA 180.1 Rev. 2.0	Turbidity	9.2	A	NTU	P385059	
	EPA 300.0 Rev. 2.1	Chloride	5.1		mg Cl/L	P385317	
		Sulfate	2.5		mg SO4/L	P385321	
		Color (true)	37		PCU	P385028	
	SM 2320 B-2011	Total Alkalinity	43		mg CaCO3/L	P385103	
	SM 2540 C-2011	TDS	79		mg/L	P385595	
	SM 2540 D-2011	TSS	10	I	mg/L	P385590	
	SM 4500 F-C-2011	Fluoride	0.051	I	mg F/L	P385106	
2184558	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P385142	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P385056	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.55		mg N/L	P385049	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P385235	
	SM 5310 B-2011	Organic Carbon	3.6		mg C/L	P385261	
2184561	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.015		mg P/L	P385013	
2184590	EPA 200.7 Rev. 4.4	Barium	27.1		ug/L	P385027	
		Calcium	16.1		mg/L	P385027	
		Iron	1.02E+03		ug/L	P385027	
		Magnesium	2.57		mg/L	P385027	
		Potassium	1.3		mg/L	P385027	
		Sodium	3.8		mg/L	P385027	
		Zinc	5.0	U	ug/L	P385027	
	EPA 200.8 Rev. 5.4	Aluminum	298		ug/L	P385027	
		Antimony	0.050	U	ug/L	P385027	
		Arsenic	0.74		ug/L	P385027	
		Boron**	14.8		ug/L	P385027	
		Cadmium	0.020	U	ug/L	P385027	
		Chromium	0.72	I	ug/L	P385027	
		Copper	0.40	U	ug/L	P385027	
		Lead	0.30	I	ug/L	P385027	
		Nickel	0.50	U	ug/L	P385027	
		Selenium	0.20	U	ug/L	P385027	
		Silver	0.010	U	ug/L	P385211	
		Thallium	0.10	U	ug/L	P385027	
		Hardness	50.7		mg/L	P385027	

Ref. Method and Comment:

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

Sample Location: Gum Creek upstream of River Road

Collection Date/Time: 07/21/2020 13:00

Field ID: G3NW0439

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184556	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P385058	
	EPA 300.0 Rev. 2.1	Chloride	3.0		mg Cl/L	P385317	
		Sulfate	0.20	U	mg SO4/L	P385321	
	SM 2120 B-2011	Color (true)	150		PCU	P385029	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P385103	
	SM 2540 C-2011	TDS	52		mg/L	P385595	
	SM 2540 D-2011	TSS	2	I	mg/L	P385590	
2184559	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385106	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P385143	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P385056	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P385049	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P385235	
2184562	SM 5310 B-2011	Organic Carbon	19		mg C/L	P385262	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385013	
2184591	EPA 200.7 Rev. 4.4	Barium	13.9		ug/L	P385027	
		Calcium	1.03		mg/L	P385027	
		Iron	1.14E+03		ug/L	P385027	
		Magnesium	0.52		mg/L	P385027	
		Potassium	0.38	I	mg/L	P385027	
		Sodium	1.6	I	mg/L	P385027	
		Zinc	5.0	U	ug/L	P385027	
	EPA 200.8 Rev. 5.4	Aluminum	531		ug/L	P385027	
		Antimony	0.050	U	ug/L	P385027	
		Arsenic	0.51		ug/L	P385027	
		Boron**	11.4		ug/L	P385027	
		Cadmium	0.020	U	ug/L	P385027	
		Chromium	0.79	I	ug/L	P385027	
		Copper	0.40	U	ug/L	P385027	
		Lead	0.47		ug/L	P385027	
		Nickel	0.53	I	ug/L	P385027	
		Selenium	0.20	U	ug/L	P385027	
		Silver	0.010	U	ug/L	P385211	
		Thallium	0.10	U	ug/L	P385027	
	SM 2340B	Hardness	4.7		mg/L	P385027	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385058

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385059

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385027

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: P385027

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
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385211

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385317

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385318

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385321

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385322

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385142

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385143

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385056

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385048

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385049

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385234

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385235

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385013

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

Reference Method: EPA 8270E
Batch ID: P384951

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P384951

Component	Result	Code	Units
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P385155

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P385155

Component	Result	Code	Units
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P385155

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

Reference Method: EPA 8321B
Batch ID: P385007

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

Reference Method: EPA 8321B
Batch ID: P385009

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385117

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

Reference Method: SM 2120 B-2011
Batch ID: P385028

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P385029

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385103

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

Reference Method: SM 2320 B-2011
Batch ID: P385168

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

Reference Method: SM 2540 C-2011
Batch ID: P385595

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385590

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385105

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P385106

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385261

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

Reference Method: SM 5310 B-2011
Batch ID: P385262

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: P385027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	104		P	85 - 115
Iron	101		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	100		P	85 - 115
Sodium	97.1		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	95.7		P	85 - 115
Boron	101		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	102		P	85 - 115
Copper	101		P	85 - 115
Lead	103		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.9		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	98.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385317

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385318

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.1		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385322

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385142

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385143

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385056

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385048

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385049

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385234

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385235

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.2		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P384951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	94.7	96.0	P/P	71 - 122
Alachlor	91.5	95.0	P/P	70 - 121
Ametryn	104	103	P/P	49 - 137
Atrazine	102	101	P/P	76 - 125
Atrazine Desethyl	93.8	94.6	P/P	31 - 144
Azinphos Methyl	122	119	P/P	67 - 150
Bromacil	93.4	94.4	P/P	36 - 121
Butylate	68.4	69.3	P/P	33 - 88.0
Carbophenothion	85.0	88.1	P/P	50 - 150
Chlorpyrifos Ethyl	86.5	89.2	P/P	73 - 117
Chlorpyrifos Methyl	88.7	92.0	P/P	68 - 121
Cyanazine	114	113	P/P	20 - 250
Demeton	80.4	84.6	P/P	30 - 123
Diazinon	101	102	P/P	70 - 128
Dimethenamid	94.2	96.4	P/P	66 - 122
Disulfoton	82.3	85.4	P/P	46 - 124
Dithiopyr	91.2	94.8	P/P	69 - 122
EPTC	67.0	68.8	P/P	31 - 90.0
Ethion	50.9	51.0	P/P	45 - 135
Ethoprop	94.8	97.9	P/P	59 - 118
Fenamiphos	85.5	88.8	P/P	30 - 136
Fipronil	98.7	100	P/P	57 - 127
Fipronil Desulfinyl	100	101	P/P	51 - 122
Fipronil Sulfide	82.2	86.2	P/P	57 - 119
Fipronil Sulfone	72.2	75.7	P/P	51 - 119
Flumioxazin	230	229	F/F	70 - 200
Fonofos	88.3	91.6	P/P	60 - 120
Hexazinone	89.3	94.0	P/P	57 - 142
Imazalil	68.2	67.9	P/P	50 - 150
Malathion	99.8	102	P/P	67 - 128
Metaxyl	93.4	94.3	P/P	21 - 148
Metolachlor	86.8	87.3	P/P	70 - 120
Metribuzin	129	130	P/P	20 - 253
Mevinphos	86.7	85.2	P/P	47 - 116
Molinate	78.3	79.0	P/P	41 - 99.0
Naled	61.4	63.1	P/P	40 - 130
Norflurazon	88.6	87.7	P/P	54 - 127
Oxadiazon	88.4	89.0	P/P	65 - 122
Parathion Ethyl	93.6	93.3	P/P	71 - 113
Parathion Methyl	116	116	P/P	73 - 129
Pendimethalin	56.9	56.6	F/F	63 - 130
Phorate	86.9	88.1	P/P	48 - 118
Prodiamine	58.3	53.3	P/P	20 - 144
Prometon	92.9	96.7	P/P	53 - 120
Prometryn	101	103	P/P	63 - 119
Pronamide	105	105	P/P	50 - 150
Propiconazole	87.6	87.7	P/P	50 - 150
Simazine	99.2	102	P/P	77 - 129
Sulfentrazone	82.6	79.5	P/P	50 - 150
Tebuconazole	24.0	21.0	P/P	20 - 118
Terbufos	97.3	101	P/P	61 - 119
Terbutylazine	93.3	94.2	P/P	75 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P385155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.8	57.2	P/P	20 - 87.0
Alpha-BHC	87.5	91.0	P/P	65 - 142
Alpha-Chlordane	91.0	89.4	P/P	58 - 106
Beta-BHC	95.6	99.7	P/P	65 - 179
Beta-Cyfluthrin	91.8	99.3	P/P	39 - 153
Bifenthrin	104	107	P/P	38 - 128
Chlorothalonil	96.8	89.3	P/P	20 - 214
Cis-Nonachlor	91.4	91.2	P/P	56 - 113
Cypermethrin	107	109	P/P	37 - 130
Dacthal	94.0	93.3	P/P	75 - 109
DDD-p,p'	98.6	98.5	P/P	66 - 119
DDE-p,p'	96.9	94.3	P/P	53 - 108
DDT-p,p'	87.7	88.2	P/P	57 - 133
Delta-BHC	112	112	P/P	68 - 187
Dicofol	71.0	75.5	P/P	66 - 123
Dieldrin	95.9	93.6	P/P	65 - 111
Endosulfan I	101	96.8	P/P	65 - 115
Endosulfan II	103	98.0	P/P	68 - 133
Endosulfan Sulfate	90.7	90.0	P/P	62 - 127
Endrin	95.3	93.6	P/P	64 - 122
Endrin Aldehyde	93.6	96.7	P/P	61 - 132
Endrin Ketone	92.7	96.0	P/P	66 - 120
Ethalfuralin	81.7	81.9	P/P	57 - 127
Gamma-BHC	99.0	101	P/P	71 - 158
Gamma-Chlordane	85.7	84.0	P/P	53 - 106
Heptachlor	82.5	79.9	P/P	45 - 96.0
Heptachlor Epoxide	94.4	93.9	P/P	64 - 109
Hexachlorobenzene	74.8	73.9	P/P	46 - 103
Lambda-Cyhalothrin	93.7	94.4	P/P	38 - 145
Methoxychlor	96.8	96.8	P/P	69 - 149
Mirex	69.6	68.9	P/P	31 - 90.0
Permethrin	97.0	97.3	P/P	41 - 108
Phenothrin	70.5	71.0	P/P	22 - 91.0
Prallethrin	68.2	69.6	P/P	32 - 92.0
Trans-Nonachlor	92.6	90.7	P/P	50 - 107
Trifluralin	80.8	80.1	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P385155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	89.4	89.5	P/P	34 - 129
Toxaphene	85.4	75.7	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P385007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	30 - 160
Acetaminophen	74.5		P	30 - 160
Acetamiprid	83.9		P	30 - 160
Afidopyropen	73.0		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P385007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	59.3		P	30 - 160
Benzovindiflupyr	82.3		P	30 - 160
Carbamazepine	73.2		P	30 - 160
Clothianidin	86.0		P	30 - 160
Dinotefuran	90.6		P	30 - 160
Diuron	68.4		P	30 - 160
Fenuron	99.8		P	30 - 160
Fluridone	109		P	30 - 160
Hydrocodone	82.2		P	30 - 160
Ibuprofen	87.7		P	30 - 160
Imazapyr	86.9		P	30 - 160
Imidacloprid	93.9		P	30 - 160
Linuron	75.5		P	30 - 160
Mandestrobin	90.5		P	30 - 160
MCPP	131		P	30 - 160
Naproxen	74.7		P	30 - 160
Primidone	78.8		P	30 - 160
Pyraclostrobin	95.6		P	30 - 160
Thiamethoxam	96.7		P	30 - 160
Tolfenpyrad	66.0		P	30 - 160
Triclopyr	99.8		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P385009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.8		P	40 - 150
AMPA	81.6		P	40 - 150
Endothall	98.9		P	40 - 150
Glufosinate	99.9		P	40 - 150
Glyphosate	97.9		P	40 - 140
Sucralose	89.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P385117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	69.1		P	30 - 160
Aldicarb	74.6		P	30 - 160
Aldicarb Sulfone	83.0		P	30 - 160
Aldicarb Sulfoxide	83.0		P	30 - 160
Carbaryl	51.2		P	30 - 160
Carbofuran	50.3		P	30 - 160
Methiocarb	51.7		P	30 - 160
Methomyl	81.2		P	30 - 160
Oxamyl	84.4		P	30 - 160
Propoxur	52.9		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P385028

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

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P385028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P385029

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P385103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 2320 B-2011
Batch ID: P385168

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P385106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385261

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385262

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P385027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184454	Barium	106	101	P/P	80 - 120
2184454	Calcium	105		P	80 - 120
2184454	Iron	109	107	P/P	80 - 120
2184454	Magnesium	111	107	P/P	80 - 120
2184454	Potassium	105	101	P/P	80 - 120
2184454	Sodium	99.9		P	80 - 120
2184454	Zinc	109	105	P/P	80 - 120
2184537	Barium	105		P	80 - 120
2184537	Calcium	103		P	80 - 120
2184537	Iron	105		P	80 - 120
2184537	Magnesium	103		P	80 - 120
2184537	Potassium	102		P	80 - 120
2184537	Sodium	99.4		P	80 - 120
2184537	Zinc	108		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P385027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184454	Aluminum	99.8	101	P/P	80 - 120
2184454	Antimony	104	104	P/P	80 - 120
2184454	Arsenic	104	104	P/P	80 - 120
2184454	Beryllium	97.7	100	P/P	80 - 120
2184454	Boron	100	102	P/P	80 - 120
2184454	Cadmium	101	103	P/P	80 - 120
2184454	Chromium	105	105	P/P	80 - 120
2184454	Cobalt	102	105	P/P	80 - 120
2184454	Copper	102	103	P/P	80 - 120
2184454	Lead	104	106	P/P	80 - 120
2184454	Manganese	101	103	P/P	80 - 120
2184454	Molybdenum	101	102	P/P	80 - 120
2184454	Nickel	102	104	P/P	80 - 120
2184454	Selenium	99.7	102	P/P	80 - 120
2184454	Thallium	107	106	P/P	80 - 120
2184537	Aluminum	101		P	80 - 120
2184537	Antimony	104		P	80 - 120
2184537	Arsenic	103		P	80 - 120
2184537	Beryllium	96.9		P	80 - 120
2184537	Boron	102		P	80 - 120
2184537	Cadmium	105		P	80 - 120
2184537	Chromium	105		P	80 - 120
2184537	Cobalt	103		P	80 - 120
2184537	Copper	100		P	80 - 120
2184537	Lead	104		P	80 - 120
2184537	Manganese	104		P	80 - 120
2184537	Molybdenum	102		P	80 - 120
2184537	Nickel	101		P	80 - 120
2184537	Selenium	99.9		P	80 - 120
2184537	Thallium	103		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184535	Silver	99.1	95.2	P/P	80 - 120
2184717	Silver	95.3		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184346	Chloride	96.3		P	90 - 110
2184513	Chloride	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184605	Chloride	99.2		P	90 - 110
2184710	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184346	Sulfate	94.8		P	90 - 110
2184513	Sulfate	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184605	Sulfate	96.5		P	90 - 110
2184710	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385142

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184495	Ammonia-N	98.2	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184564	Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184564	Kjeldahl Nitrogen	99.0	95.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184397	NO2NO3-N	95.8	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184612	NO2NO3-N	97.5	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184442	Total-P	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184557	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184565	O-Phosphate-P	96.6	97.3	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P384951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184193	Acetochlor	98.8	90.7	P/P	68 - 126
2184193	Alachlor	88.5	78.4	P/P	66 - 125
2184193	Ametryn	107	124	P/P	31 - 182
2184193	Atrazine	110	99.9	P/P	68 - 137
2184193	Atrazine Desethyl	102	79.5	P/P	13 - 161
2184193	Azinphos Methyl	73.0	123	P/P	54 - 162
2184193	Bromacil	94.4	84.2	P/P	34 - 144
2184193	Butylate	64.7	58.7	P/P	16 - 92.0
2184193	Carbophenothion	82.9	72.8	P/P	50 - 150
2184193	Chlorpyrifos Ethyl	82.8	79.1	P/P	63 - 124
2184193	Chlorpyrifos Methyl	89.3	77.9	P/P	64 - 125
2184193	Cyanazine	88.4	84.2	P/P	13 - 245
2184193	Demeton	93.1	87.0	P/P	20 - 154
2184193	Diazinon	108	98.9	P/P	66 - 141
2184193	Dimethenamid	77.1	71.9	P/P	50 - 130
2184193	Disulfoton	89.6	81.0	P/P	55 - 130
2184193	Dithiopyr	87.6	81.2	P/P	66 - 122
2184193	EPTC	59.3	53.7	P/P	15 - 93.0
2184193	Ethion	17.2	15.6	P/P	15 - 148
2184193	Ethoprop	113	107	P/P	59 - 126
2184193	Fenamiphos	65.6	59.2	P/P	39 - 137
2184193	Fipronil	94.0	86.6	P/P	47 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P384951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184193	Fipronil Desulfinyl	94.6	84.5	P/P	43 - 121
2184193	Fipronil Sulfide	81.0	73.0	P/P	29 - 134
2184193	Fipronil Sulfone	73.6	65.1	P/P	19 - 131
2184193	Flumioxazin	210	196	F/P	70 - 200
2184193	Fonofos	101	91.7	P/P	62 - 128
2184193	Hexazinone	104	100	P/P	58 - 154
2184193	Imazalil	81.3	73.1	P/P	50 - 150
2184193	Malathion	101	91.9	P/P	54 - 135
2184193	Metalaxyl	95.8	84.9	P/P	46 - 136
2184193	Metribuzin	136	124	P/P	44 - 277
2184193	Mevinphos	105	102	P/P	44 - 135
2184193	Molinate	81.8	74.0	P/P	31 - 104
2184193	Naled	65.5	60.3	P/P	40 - 130
2184193	Norflurazon	82.8	75.6	P/P	32 - 134
2184193	Oxadiazon	80.8	74.0	P/P	55 - 123
2184193	Parathion Ethyl	99.4	92.8	P/P	67 - 120
2184193	Parathion Methyl	128	118	P/P	70 - 140
2184193	Pendimethalin	73.1	65.7	P/P	59 - 145
2184193	Phorate	111	102	P/P	52 - 127
2184193	Prodiamine	96.4	87.3	P/P	11 - 157
2184193	Prometon	93.7	85.0	P/P	55 - 130
2184193	Prometryn	106	95.2	P/P	55 - 127
2184193	Pronamide	108	103	P/P	50 - 150
2184193	Propiconazole	84.5	72.2	P/P	50 - 150
2184193	Simazine	103	103	P/P	58 - 159
2184193	Sulfentrazone	72.2	64.4	P/P	50 - 150
2184193	Tebuconazole	10.7	10.1	P/P	10 - 122
2184193	Terbufos	115	108	P/P	65 - 131
2184193	Terbutylazine	98.9	90.7	P/P	63 - 131

Reference Method: EPA 8270E
Batch ID: P385155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2185635	Aldrin	61.5		P	32 - 82.0
2185635	Alpha-BHC	92.4		P	68 - 157
2185635	Alpha-Chlordane	99.4		P	54 - 108
2185635	Beta-BHC	121		P	54 - 200
2185635	Beta-Cyfluthrin	111		P	50 - 154
2185635	Bifenthrin	120		P	49 - 124
2185635	Chlorothalonil	25.1		P	10 - 289
2185635	Cis-Nonachlor	103		P	53 - 112
2185635	Cypermethrin	125		P	43 - 141
2185635	Dacthal	99.1		P	75 - 112
2185635	DDD-p,p'	111		P	58 - 125
2185635	DDE-p,p'	98.9		P	50 - 108
2185635	DDT-p,p'	93.4		P	52 - 140
2185635	Delta-BHC	158		P	61 - 228
2185635	Dicofol	76.5		P	59 - 130
2185635	Dieldrin	101		P	57 - 121
2185635	Endosulfan I	111		P	62 - 123
2185635	Endosulfan II	115		P	48 - 163

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P385155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2185635	Endosulfan Sulfate	109		P	63 - 132
2185635	Endrin	107		P	58 - 128
2185635	Endrin Aldehyde	106		P	44 - 126
2185635	Endrin Ketone	111		P	68 - 127
2185635	Ethalfuralin	87.2		P	55 - 131
2185635	Gamma-BHC	113		P	54 - 206
2185635	Gamma-Chlordane	92.8		P	52 - 105
2185635	Heptachlor	84.6		P	47 - 94.0
2185635	Heptachlor Epoxide	105		P	61 - 113
2185635	Hexachlorobenzene	74.9		P	45 - 100
2185635	Lambda-Cyhalothrin	116		P	37 - 165
2185635	Methoxychlor	94.3		P	63 - 153
2185635	Mirex	85.0		P	38 - 90.0
2185635	Permethrin	105		P	45 - 112
2185635	Phenothrin	98.4		P	22 - 118
2185635	Prallethrin	101		P	21 - 114
2185635	Trans-Nonachlor	102		P	50 - 103
2185635	Trifluralin	83.9		P	57 - 122

Reference Method: EPA 8276
Batch ID: P385155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2185207	Chlordane	82.1	78.1	P/P	34 - 129
2185207	Toxaphene	87.5	78.8	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P385007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184390	2,4-D	133	127	P/P	30 - 160
2184390	Acetaminophen	79.6	80.1	P/P	30 - 160
2184390	Acetamiprid	73.9	72.5	P/P	30 - 160
2184390	Afidopyropen	73.1	68.5	P/P	30 - 160
2184390	Bentazon	46.4	43.9	P/P	30 - 160
2184390	Benzovindiflupyr	77.5	72.2	P/P	30 - 160
2184390	Carbamazepine	58.0	59.1	P/P	30 - 160
2184390	Clothianidin	72.1	70.1	P/P	30 - 160
2184390	Dinotefuran	93.6	91.4	P/P	30 - 160
2184390	Diuron	53.1	53.6	P/P	30 - 160
2184390	Fenuron	84.0	82.8	P/P	30 - 160
2184390	Fluridone	102	94.7	P/P	30 - 160
2184390	Hydrocodone	68.9	70.0	P/P	30 - 160
2184390	Ibuprofen	82.2	69.8	P/P	30 - 160
2184390	Imazapyr	95.1	101	P/P	30 - 160
2184390	Imidacloprid	132	134	P/P	30 - 160
2184390	Linuron	67.0	61.2	P/P	30 - 160
2184390	Mandestrobin	79.6	79.0	P/P	30 - 160
2184390	MCP	137	138	P/P	30 - 160
2184390	Naproxen	60.0	64.4	P/P	30 - 160
2184390	Primidone	82.5	87.8	P/P	30 - 160
2184390	Pyraclostrobin	75.3	74.7	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184390	Thiamethoxam	104	101	P/P	30 - 160
2184390	Tolfenpyrad	52.4	57.4	P/P	30 - 160
2184390	Triclopyr	113	115	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P385009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184578	Acesulfame K	122	125	P/P	40 - 150
2184578	AMPA	94.2	87.9	P/P	40 - 150
2184578	Endothall	129	124	P/P	40 - 150
2184578	Glufosinate	92.9	102	P/P	40 - 150
2184578	Glyphosate	74.4	80.3	P/P	40 - 140
2184578	Sucralose	93.6	98.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P385117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184189	3-Hydroxycarbofuran	72.5	74.0	P/P	30 - 160
2184189	Aldicarb	52.2	53.6	P/P	30 - 160
2184189	Aldicarb Sulfone	86.2	89.4	P/P	30 - 160
2184189	Aldicarb Sulfoxide	41.3	38.8	P/P	30 - 160
2184189	Carbaryl	43.3	45.7	P/P	30 - 160
2184189	Carbofuran	44.8	44.8	P/P	30 - 160
2184189	Methiocarb	51.5	47.5	P/P	30 - 160
2184189	Methomyl	84.8	79.6	P/P	30 - 160
2184189	Oxamyl	86.6	84.7	P/P	30 - 160
2184189	Propoxur	45.1	47.3	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P385105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184223	Fluoride	96.6	96.1	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P385106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184563	Fluoride	107	106	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184442	Organic Carbon	97.1	98.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P385262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184625	Organic Carbon	93.0	94.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184801	Turbidity	3.51	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184555	Turbidity	4.79	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P385027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184454	Barium	4.05	Spike	P	0 - 20
2184454	Calcium	2.56	Spike	P	0 - 20
2184454	Iron	2.16	Spike	P	0 - 20
2184454	Magnesium	2.36	Spike	P	0 - 20
2184454	Potassium	2.85	Spike	P	0 - 20
2184454	Sodium	4.03	Spike	P	0 - 20
2184454	Zinc	3.69	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184454	Aluminum	1.04	Spike	P	0 - 20
2184454	Antimony	0.0786	Spike	P	0 - 20
2184454	Arsenic	0.507	Spike	P	0 - 20
2184454	Beryllium	2.60	Spike	P	0 - 20
2184454	Boron	1.31	Spike	P	0 - 20
2184454	Cadmium	2.48	Spike	P	0 - 20
2184454	Chromium	0.650	Spike	P	0 - 20
2184454	Cobalt	2.94	Spike	P	0 - 20
2184454	Copper	1.05	Spike	P	0 - 20
2184454	Lead	1.74	Spike	P	0 - 20
2184454	Manganese	1.80	Spike	P	0 - 20
2184454	Molybdenum	1.48	Spike	P	0 - 20
2184454	Nickel	1.33	Spike	P	0 - 20
2184454	Selenium	2.05	Spike	P	0 - 20
2184454	Thallium	0.995	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P385211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184535	Silver	4.01	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184346	Chloride	0.179	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184605	Chloride	0.724	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184346	Sulfate	0.298	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184605	Sulfate	0.692	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184495	Ammonia-N	0.507	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184564	Ammonia-N	0.865	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184564	Kjeldahl Nitrogen	2.94	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184397	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184612	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184442	Total-P	1.05	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184557	Total-P	1.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184565	O-Phosphate-P	0.682	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184193	Acetochlor	8.52	Spike	P	0 - 30
2184193	Alachlor	9.42	Spike	P	0 - 30
2184193	Ametryn	14.3	Spike	P	0 - 30
2184193	Atrazine	9.19	Spike	P	0 - 30
2184193	Atrazine Desethyl	24.6	Spike	P	0 - 30
2184193	Azinphos Methyl	51.2	Spike	F	0 - 30
2184193	Bromacil	11.4	Spike	P	0 - 30
2184193	Butylate	9.63	Spike	P	0 - 30
2184193	Carbophenothion	13.0	Spike	P	0 - 30
2184193	Chlorpyrifos Ethyl	4.63	Spike	P	0 - 30
2184193	Chlorpyrifos Methyl	13.6	Spike	P	0 - 30
2184193	Cyanazine	4.90	Spike	P	0 - 30
2184193	Demeton	6.69	Spike	P	0 - 30
2184193	Diazinon	9.14	Spike	P	0 - 30
2184193	Dimethenamid	7.01	Spike	P	0 - 30
2184193	Disulfoton	10.0	Spike	P	0 - 30
2184193	Dithiopyr	7.56	Spike	P	0 - 30
2184193	EPTC	9.91	Spike	P	0 - 30
2184193	Ethion	10.2	Spike	P	0 - 30
2184193	Ethoprop	5.40	Spike	P	0 - 30
2184193	Fenamiphos	10.2	Spike	P	0 - 30
2184193	Fipronil	8.23	Spike	P	0 - 30
2184193	Fipronil Desulfinyl	11.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184193	Fipronil Sulfide	10.3	Spike	P	0 - 30
2184193	Fipronil Sulfone	12.3	Spike	P	0 - 30
2184193	Flumioxazin	7.09	Spike	P	0 - 30
2184193	Fonofos	9.17	Spike	P	0 - 30
2184193	Hexazinone	3.51	Spike	P	0 - 30
2184193	Imazalil	10.6	Spike	P	0 - 30
2184193	Malathion	9.71	Spike	P	0 - 30
2184193	Metalaxyl	12.0	Spike	P	0 - 30
2184193	Metolachlor	7.56	Spike	P	0 - 30
2184193	Metribuzin	8.91	Spike	P	0 - 30
2184193	Mevinphos	3.51	Spike	P	0 - 30
2184193	Molinate	9.97	Spike	P	0 - 30
2184193	Naled	8.28	Spike	P	0 - 30
2184193	Norflurazon	9.12	Spike	P	0 - 30
2184193	Oxadiazon	8.86	Spike	P	0 - 30
2184193	Parathion Ethyl	6.83	Spike	P	0 - 30
2184193	Parathion Methyl	7.83	Spike	P	0 - 30
2184193	Pendimethalin	10.5	Spike	P	0 - 30
2184193	Phorate	7.98	Spike	P	0 - 30
2184193	Prodiamine	9.97	Spike	P	0 - 30
2184193	Prometon	9.65	Spike	P	0 - 30
2184193	Prometryn	10.5	Spike	P	0 - 30
2184193	Pronamide	4.29	Spike	P	0 - 30
2184193	Propiconazole	12.8	Spike	P	0 - 30
2184193	Simazine	0.553	Spike	P	0 - 30
2184193	Sulfentrazone	11.4	Spike	P	0 - 30
2184193	Tebuconazole	6.23	Spike	P	0 - 30
2184193	Terbufos	6.66	Spike	P	0 - 30
2184193	Terbutylazine	8.63	Spike	P	0 - 30
LFB	Acetochlor	1.43	LCS	P	0 - 30
LFB	Alachlor	3.77	LCS	P	0 - 30
LFB	Ametryn	0.327	LCS	P	0 - 30
LFB	Atrazine	0.624	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.898	LCS	P	0 - 30
LFB	Azinphos Methyl	2.70	LCS	P	0 - 30
LFB	Bromacil	1.11	LCS	P	0 - 30
LFB	Butylate	1.39	LCS	P	0 - 30
LFB	Carbophenothion	3.67	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.08	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.71	LCS	P	0 - 30
LFB	Cyanazine	0.277	LCS	P	0 - 30
LFB	Demeton	5.08	LCS	P	0 - 30
LFB	Diazinon	0.970	LCS	P	0 - 30
LFB	Dimethenamid	2.31	LCS	P	0 - 30
LFB	Disulfoton	3.76	LCS	P	0 - 30
LFB	Dithiopyr	3.85	LCS	P	0 - 30
LFB	EPTC	2.62	LCS	P	0 - 30
LFB	Ethion	0.231	LCS	P	0 - 30
LFB	Ethoprop	3.18	LCS	P	0 - 30
LFB	Fenamiphos	3.87	LCS	P	0 - 30
LFB	Fipronil	1.76	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Desulfinyl	0.476	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.81	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.67	LCS	P	0 - 30
LFB	Flumioxazin	0.0955	LCS	P	0 - 30
LFB	Fonofos	3.62	LCS	P	0 - 30
LFB	Hexazinone	5.14	LCS	P	0 - 30
LFB	Imazalil	0.460	LCS	P	0 - 30
LFB	Malathion	2.20	LCS	P	0 - 30
LFB	Metalaxyl	1.02	LCS	P	0 - 30
LFB	Metolachlor	0.548	LCS	P	0 - 30
LFB	Metribuzin	0.446	LCS	P	0 - 30
LFB	Mevinphos	1.82	LCS	P	0 - 30
LFB	Molinate	0.795	LCS	P	0 - 30
LFB	Naled	2.71	LCS	P	0 - 30
LFB	Norflurazon	0.943	LCS	P	0 - 30
LFB	Oxadiazon	0.646	LCS	P	0 - 30
LFB	Parathion Ethyl	0.277	LCS	P	0 - 30
LFB	Parathion Methyl	0.263	LCS	P	0 - 30
LFB	Pendimethalin	0.489	LCS	P	0 - 30
LFB	Phorate	1.43	LCS	P	0 - 30
LFB	Prodiamine	8.88	LCS	P	0 - 30
LFB	Prometon	4.00	LCS	P	0 - 30
LFB	Prometryn	1.91	LCS	P	0 - 30
LFB	Pronamide	0.0334	LCS	P	0 - 30
LFB	Propiconazole	0.0877	LCS	P	0 - 30
LFB	Simazine	2.83	LCS	P	0 - 30
LFB	Sulfentrazone	3.76	LCS	P	0 - 30
LFB	Tebuconazole	13.1	LCS	P	0 - 30
LFB	Terbufos	3.45	LCS	P	0 - 30
LFB	Terbutylazine	1.02	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P385155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	2.79	LCS	P	0 - 30
LFB	Alpha-BHC	3.94	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.79	LCS	P	0 - 30
LFB	Beta-BHC	4.21	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	7.84	LCS	P	0 - 30
LFB	Bifenthrin	3.09	LCS	P	0 - 30
LFB	Chlorothalonil	8.00	LCS	P	0 - 30
LFB	Cis-Nonachlor	0.243	LCS	P	0 - 30
LFB	Cypermethrin	2.30	LCS	P	0 - 30
LFB	Dacthal	0.729	LCS	P	0 - 30
LFB	DDD-p,p'	0.0997	LCS	P	0 - 30
LFB	DDE-p,p'	2.68	LCS	P	0 - 30
LFB	DDT-p,p'	0.596	LCS	P	0 - 30
LFB	Delta-BHC	0.766	LCS	P	0 - 30
LFB	Dicofol	6.14	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P385155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dieldrin	2.37	LCS	P	0 - 30
LFB	Endosulfan I	4.54	LCS	P	0 - 30
LFB	Endosulfan II	4.93	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.844	LCS	P	0 - 30
LFB	Endrin	1.77	LCS	P	0 - 30
LFB	Endrin Aldehyde	3.24	LCS	P	0 - 30
LFB	Endrin Ketone	3.50	LCS	P	0 - 30
LFB	Ethalfuralin	0.304	LCS	P	0 - 30
LFB	Gamma-BHC	2.07	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.94	LCS	P	0 - 30
LFB	Heptachlor	3.16	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.579	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.25	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	0.753	LCS	P	0 - 30
LFB	Methoxychlor	0.0310	LCS	P	0 - 30
LFB	Mirex	1.12	LCS	P	0 - 30
LFB	Permethrin	0.307	LCS	P	0 - 30
LFB	Phenothrin	0.685	LCS	P	0 - 30
LFB	Prallethrin	1.98	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.11	LCS	P	0 - 30
LFB	Trifluralin	0.934	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P385155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2185207	Chlordane	4.55	Spike	P	0 - 30
2185207	Toxaphene	10.5	Spike	P	0 - 30
LFB	Chlordane	0.0403	LCS	P	0 - 30
LFB	Toxaphene	12.1	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184390	2,4-D	3.65	Spike	P	0 - 30
2184390	Acetaminophen	0.388	Spike	P	0 - 30
2184390	Acetamiprid	1.84	Spike	P	0 - 30
2184390	Afidopyropen	6.42	Spike	P	0 - 30
2184390	Bentazon	3.81	Spike	P	0 - 30
2184390	Benzovindiflupyr	7.15	Spike	P	0 - 30
2184390	Carbamazepine	1.73	Spike	P	0 - 30
2184390	Clothianidin	2.84	Spike	P	0 - 30
2184390	Dinotefuran	2.44	Spike	P	0 - 30
2184390	Diuron	1.04	Spike	P	0 - 30
2184390	Fenuron	1.55	Spike	P	0 - 30
2184390	Fluridone	6.64	Spike	P	0 - 30
2184390	Hydrocodone	1.62	Spike	P	0 - 30
2184390	Ibuprofen	16.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P385007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184390	Imazapyr	3.41	Spike	P	0 - 30
2184390	Imidacloprid	1.59	Spike	P	0 - 30
2184390	Linuron	9.00	Spike	P	0 - 30
2184390	Mandestrobin	0.848	Spike	P	0 - 30
2184390	MCPP	0.627	Spike	P	0 - 30
2184390	Naproxen	7.14	Spike	P	0 - 30
2184390	Primidone	5.96	Spike	P	0 - 30
2184390	Pyraclostrobin	0.825	Spike	P	0 - 30
2184390	Thiamethoxam	3.31	Spike	P	0 - 30
2184390	Tolfenpyrad	9.00	Spike	P	0 - 30
2184390	Triclopyr	2.34	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P385009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184578	Acesulfame K	2.50	Spike	P	0 - 30
2184578	AMPA	6.93	Spike	P	0 - 30
2184578	Endothall	3.68	Spike	P	0 - 30
2184578	Glufosinate	9.40	Spike	P	0 - 30
2184578	Glyphosate	7.67	Spike	P	0 - 30
2184578	Sucralose	5.01	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P385117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184189	3-Hydroxycarbofuran	2.02	Spike	P	0 - 30
2184189	Aldicarb	2.63	Spike	P	0 - 30
2184189	Aldicarb Sulfone	3.62	Spike	P	0 - 30
2184189	Aldicarb Sulfoxide	6.34	Spike	P	0 - 30
2184189	Carbaryl	5.48	Spike	P	0 - 30
2184189	Carbofuran	0.179	Spike	P	0 - 30
2184189	Methiocarb	8.06	Spike	P	0 - 30
2184189	Methomyl	6.22	Spike	P	0 - 30
2184189	Oxamyl	2.23	Spike	P	0 - 30
2184189	Propoxur	4.64	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P385028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184494	Color (true)	4.02	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P385029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184563	Color (true)	9.86	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P385103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184563	Total Alkalinity	1.17	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P385168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184223	Total Alkalinity	1.25	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P385595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184563	TDS	0.784	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184223	Fluoride	0.464	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P385106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184563	Fluoride	0.464	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184442	Organic Carbon	0.788	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P385262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184625	Organic Carbon	0.813	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2184577
 Field Sample ID: G3NW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	30.8	P	30 - 160

Lab Sample ID: 2184578
 Field Sample ID: G3NW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.1	P	30 - 160
EPA 8321B	Diuron-d6	47.1	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.3	P	30 - 160
EPA 8321B	Primidone-d5	74.6	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2184579
 Field Sample ID: G3NW0444

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.2	P	30 - 160
EPA 8321B	Diuron-d6	71.0	P	30 - 160
EPA 8321B	Endothall-d6	94.5	P	30 - 160
EPA 8321B	Endothall-d6	94.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.4	P	30 - 160
EPA 8321B	Primidone-d5	95.6	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	30 - 160

Lab Sample ID: 2184580
 Field Sample ID: G3NW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	104	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	78.4	P	34 - 106
EPA 8276	Decachlorobiphenyl	70.6	P	26 - 97.0
EPA 8276	PCNB	86.4	P	38 - 141

Lab Sample ID: 2184581
 Field Sample ID: G3NW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	109	P	72 - 135
EPA 8270E	Terbufos-d10	100	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100021

Included Lab Sample IDs: 2184553, 2184560, 2184561, 2184562, 2184565

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

Reference Method: EPA 8321B

Run ID: A100025

Included Lab Sample IDs: 2184578, 2184579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	78.8	89.5	P/P	60 - 160
Endothall	109	111	P/P	60 - 160

Reference Method: SM 2120 B-2011

Run ID: A100026

Included Lab Sample IDs: 2184551, 2184554, 2184555, 2184556, 2184563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	102	102	P/P	90 - 115
Color (true)	102	103	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100035

Included Lab Sample IDs: 2184552, 2184557, 2184558, 2184559, 2184564

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100038

Included Lab Sample IDs: 2184551, 2184554, 2184555, 2184556, 2184563

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100050

Included Lab Sample IDs: 2184588, 2184589, 2184590, 2184591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Aluminum	102	102	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Antimony	102	103	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110
Boron	101	102	P/P	90 - 110
Boron	99.3	101	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Cadmium	103	104	P/P	90 - 110
Chromium	100	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100050

Included Lab Sample IDs: 2184588, 2184589, 2184590, 2184591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	99.9	98.9	P/P	90 - 110
Cobalt	101	100	P/P	90 - 110
Copper	99.1	98.4	P/P	90 - 110
Copper	99.9	99.1	P/P	90 - 110
Lead	104	105	P/P	90 - 110
Lead	105	104	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Molybdenum	101	99.3	P/P	90 - 110
Nickel	100	99.2	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	102	103	P/P	90 - 110
Selenium	103	102	P/P	90 - 110
Thallium	101	99.0	P/P	90 - 110
Thallium	99.3	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100051

Included Lab Sample IDs: 2184588, 2184589, 2184590, 2184591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	104	P/P	90 - 110
Barium	104	101	P/P	90 - 110
Calcium	105	107	P/P	90 - 110
Calcium	107	104	P/P	90 - 110
Iron	102	104	P/P	90 - 110
Iron	104	101	P/P	90 - 110
Magnesium	104	105	P/P	90 - 110
Magnesium	105	103	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Potassium	101	98.9	P/P	90 - 110
Sodium	99.5	100	P/P	90 - 110
Sodium	100	98.0	P/P	90 - 110
Zinc	105	105	P/P	90 - 110
Zinc	106	105	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100053

Included Lab Sample IDs: 2184578, 2184579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	81.2	79.5	P/P	60 - 160
Glufosinate	101	98.9	P/P	60 - 160
Glyphosate	89.6	93.9	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A100054

Included Lab Sample IDs: 2184555, 2184556, 2184563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.9	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A100054

Included Lab Sample IDs: 2184551, 2184554, 2184555, 2184556, 2184563

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100064

Included Lab Sample IDs: 2184552, 2184557, 2184558, 2184559, 2184564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	104	P/P	90 - 110
Kjeldahl Nitrogen	98.0	96.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100073

Included Lab Sample IDs: 2184552, 2184557, 2184558, 2184559, 2184564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100080

Included Lab Sample IDs: 2184551, 2184554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100103

Included Lab Sample IDs: 2184588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	95.8	92.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100127

Included Lab Sample IDs: 2184552, 2184557, 2184558, 2184559, 2184564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	96.6	P/P	90 - 110
Organic Carbon	96.2	95.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100141

Included Lab Sample IDs: 2184578, 2184579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	82.2	96.2	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100147

Included Lab Sample IDs: 2184578, 2184579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	95.2	P/P	50 - 150
3-Hydroxycarbofuran	101	106	P/P	60 - 150
Acetaminophen	103	98.0	P/P	60 - 160
Acetamiprid	119	114	P/P	50 - 150
Afidopyropen	109	104	P/P	50 - 150
Aldicarb	99.8	105	P/P	60 - 150
Aldicarb Sulfone	92.9	95.1	P/P	50 - 150
Aldicarb Sulfoxide	99.6	95.7	P/P	50 - 150
Bentazon	79.3	90.2	P/P	50 - 160
Benzovindiflupyr	116	111	P/P	50 - 150
Carbamazepine	104	105	P/P	60 - 150
Carbaryl	93.6	100	P/P	60 - 150
Carbofuran	104	96.7	P/P	50 - 150
Clothianidin	109	100	P/P	60 - 150
Dinotefuran	103	100	P/P	50 - 150
Diuron	107	104	P/P	60 - 160
Fenuron	112	108	P/P	60 - 150
Fluridone	103	103	P/P	60 - 160
Hydrocodone	107	105	P/P	60 - 150
Ibuprofen	92.7	95.8	P/P	50 - 160
Imazapyr	86.8	93.5	P/P	50 - 150
Imidacloprid	107	99.5	P/P	60 - 150
Linuron	104	104	P/P	60 - 150
Mandestrobin	120	116	P/P	50 - 150
MCPP	111	110	P/P	50 - 150
Methiocarb	96.3	110	P/P	50 - 150
Methomyl	101	102	P/P	50 - 150
Naproxen	119	93.3	P/P	50 - 160
Oxamyl	105	101	P/P	50 - 150
Primidone	101	98.5	P/P	60 - 150
Propoxur	103	98.3	P/P	50 - 150
Pyraclostrobin	110	102	P/P	60 - 150
Thiamethoxam	102	97.3	P/P	50 - 150
Tolfenpyrad	104	91.1	P/P	60 - 150
Triclopyr	109	93.9	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100152

Included Lab Sample IDs: 2184551, 2184554, 2184555, 2184556, 2184563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Chloride	101	100	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110
Sulfate	101	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100180

Included Lab Sample IDs: 2184588, 2184589, 2184590, 2184591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	95.5	96.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100186

Included Lab Sample IDs: 2184552, 2184557, 2184558, 2184559, 2184564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	101	99.8	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A100222

Included Lab Sample IDs: 2184580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.7		P	80 - 120
Toxaphene	108		P	80 - 120

Reference Method: EPA 8270E

Run ID: A100246

Included Lab Sample IDs: 2184580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	104		P	80 - 120
Alpha-BHC	96.4		P	80 - 120
Alpha-Chlordane	99.1		P	80 - 120
Beta-BHC	84.4		P	80 - 120
Beta-Cyfluthrin	95.0		P	80 - 120
Bifenthrin	96.2		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cis-Nonachlor	95.6		P	80 - 120
Cypermethrin	87.3		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	93.7		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	94.1		P	80 - 120
Dicofol	90.4		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	92.3		P	80 - 120
Endosulfan Sulfate	89.9		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	100		P	80 - 120
Endrin Ketone	91.5		P	80 - 120
Ethalfuralin	96.6		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	93.5		P	80 - 120
Heptachlor	100		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	95.1		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A100246

Included Lab Sample IDs: 2184580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lambda-Cyhalothrin	87.5		P	80 - 120
Methoxychlor	100		P	80 - 120
Mirex	94.4		P	80 - 120
Permethrin	93.2		P	80 - 120
Phenothrin	87.8		P	80 - 120
Prallethrin	87.8		P	80 - 120
Trans-Nonachlor	98.0		P	80 - 120
Trifluralin	94.1		P	80 - 120

Reference Method: EPA 8270E

Run ID: A100317

Included Lab Sample IDs: 2184581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.5		P	80 - 120
Alachlor	98.4		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	97.8		P	80 - 120
Atrazine Desethyl	98.4		P	80 - 120
Azinphos Methyl	96.6		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	100		P	80 - 120
Carbophenothion	99.3		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	98.6		P	80 - 120
Cyanazine	94.4		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	92.6		P	80 - 120
Dimethenamid	98.4		P	80 - 120
Disulfoton	93.4		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	99.1		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	97.9		P	80 - 120
Fenamiphos	101		P	80 - 120
Fipronil	98.2		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Flumioxazin	91.3		P	80 - 120
Fonofos	96.7		P	80 - 120
Hexazinone	98.6		P	80 - 120
Imazalil	120		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	97.2		P	80 - 120
Metribuzin	99.8		P	80 - 120
Mevinphos	97.2		P	80 - 120
Molinate	101		P	80 - 120
Naled	113		P	80 - 120
Norflurazon	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A100317

Included Lab Sample IDs: 2184581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	101		P	80 - 120
Parathion Ethyl	98.8		P	80 - 120
Parathion Methyl	93.2		P	80 - 120
Pendimethalin	106		P	80 - 120
Phorate	97.7		P	80 - 120
Prodiamine	95.1		P	80 - 120
Prometon	99.5		P	80 - 120
Prometryn	101		P	80 - 120
Pronamide	97.0		P	80 - 120
Propiconazole	103		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	98.0		P	80 - 120
Tebuconazole	98.9		P	80 - 120
Terbufos	94.6		P	80 - 120
Terbuthylazine	99.6		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	
								SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							3.51	
	Turbidity							4.79	
EPA 200.7 Rev. 4.4	Barium	100		106	101	105			4.05
	Calcium	104		105	103				2.56
	Iron	101		109	107	105			2.16
	Magnesium	105		111	107	103			2.36
	Potassium	100		105	101	102			2.85
	Sodium	97.1		99.9	99.4				4.03
	Zinc	104		105	108	109			3.69
EPA 200.8 Rev. 5.4	Aluminum	99.6		99.8	101	101			1.04
	Antimony	101		104	104	104			0.0786
	Arsenic	102		104	104	103			0.507
	Beryllium	95.7		97.7	100	96.9			2.60
	Boron	101		100	102	102			1.31
	Cadmium	102		101	103	105			2.48
	Chromium	102		105	105	105			0.650
	Cobalt	102		102	105	103			2.94
	Copper	101		102	103	100			1.05
	Lead	103		104	106	104			1.74
	Manganese	101		101	103	104			1.80
	Molybdenum	100		101	102	102			1.48
	Nickel	100		102	104	101			1.33
	Selenium	99.9		99.7	102	99.9			2.05
	Silver	98.6		99.1	95.2	95.3			4.01
	Thallium	101		107	106	103			0.995
EPA 300.0 Rev. 2.1	Chloride	99.5		96.3	98.5			0.179	
	Chloride	100		99.2	99.7			0.724	
	Sulfate	97.1		94.8	96.6			0.298	
	Sulfate	98.8		96.5	98.2			0.692	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6		98.2	97.6				0.507
	Ammonia-N	99.2		100	98.8				0.865
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104		99.0	95.5				2.94
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0		95.8	95.8				0.0
	NO ₂ NO ₃ -N	99.5		97.5	98.0				0.512
EPA 365.1 Rev. 2.0	Total-P	103		104	103				1.05
	Total-P	102		104	106				1.56
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2		96.6	97.3				0.682
EPA 8270E	Acetochlor	94.7	96.0	98.8	90.7		1.43		8.52
	Alachlor	91.5	95.0	78.4	88.5		3.77		9.42
	Aldrin	58.8	57.2	61.5			2.79		
	Alpha-BHC	87.5	91.0	92.4			3.94		
	Alpha-Chlordane	91.0	89.4	99.4			1.79		
	Ametryn	104	103	124	107		0.327		14.3
	Atrazine	102	101	99.9	110		0.624		9.19
	Atrazine Desethyl	93.8	94.6	79.5	102		0.898		24.6
	Azinphos Methyl	122	119	123	73.0		2.70		51.2
	Beta-BHC	99.7	95.6	121			4.21		
	Beta-Cyfluthrin	99.3	91.8	111			7.84		
	Bifenthrin	107	104	120			3.09		
	Bromacil	93.4	94.4	84.2	94.4		1.11		11.4
	Butylate	68.4	69.3	58.7	64.7		1.39		9.63
	Carbophenothion	85.0	88.1	72.8	82.9		3.67		13.0
	Chlorothalonil	96.8	89.3	25.1			8.00		
	Chlorpyrifos Ethyl	86.5	89.2	82.8	79.1		3.08		4.63

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Chlorpyrifos Methyl	88.7	92.0	89.3	77.9	3.71		13.6
	Cis-Nonachlor	91.4	91.2	103		0.243		
	Cyanazine	114	113	84.2	88.4	0.277		4.90
	Cypermethrin	107	109	125		2.30		
	Dacthal	94.0	93.3	99.1		0.729		
	DDD-p,p'	98.6	98.5	111		0.0997		
	DDE-p,p'	96.9	94.3	98.9		2.68		
	DDT-p,p'	87.7	88.2	93.4		0.596		
	Delta-BHC	112	112	158		0.766		
	Demeton	80.4	84.6	87.0	93.1	5.08		6.69
	Diazinon	101	102	98.9	108	0.970		9.14
	Dicofol	71.0	75.5	76.5		6.14		
	Dieldrin	95.9	93.6	101		2.37		
	Dimethenamid	94.2	96.4	71.9	77.1	2.31		7.01
	Disulfoton	82.3	85.4	81.0	89.6	3.76		10.0
	Dithiopyr	91.2	94.8	81.2	87.6	3.85		7.56
	Endosulfan I	101	96.8	111		4.54		
	Endosulfan II	103	98.0	115		4.93		
	Endosulfan Sulfate	90.7	90.0	109		0.844		
	Endrin	95.3	93.6	107		1.77		
	Endrin Aldehyde	93.6	96.7	106		3.24		
	Endrin Ketone	92.7	96.0	111		3.50		
	EPTC	67.0	68.8	53.7	59.3	2.62		9.91
	Ethalfuralin	81.7	81.9	87.2		0.304		
	Ethion	50.9	51.0	15.6	17.2	0.231		10.2
	Ethoprop	94.8	97.9	107	113	3.18		5.40
	Fenamiphos	85.5	88.8	59.2	65.6	3.87		10.2
	Fipronil	98.7	100	86.6	94.0	1.76		8.23
	Fipronil Desulfinyl	100	101	84.5	94.6	0.476		11.4
	Fipronil Sulfide	82.2	86.2	73.0	81.0	4.81		10.3
	Fipronil Sulfone	72.2	75.7	65.1	73.6	4.67		12.3
	Flumioxazin	230	229	196	210	0.0955		7.09
	Fonofos	88.3	91.6	91.7	101	3.62		9.17
	Gamma-BHC	101	99.0	113		2.07		
	Gamma-Chlordane	85.7	84.0	92.8		1.94		
	Heptachlor	82.5	79.9	84.6		3.16		
	Heptachlor Epoxide	94.4	93.9	105		0.579		
	Hexachlorobenzene	74.8	73.9	74.9		1.25		
	Hexazinone	89.3	94.0	100	104	5.14		3.51
	Imazalil	68.2	67.9	73.1	81.3	0.460		10.6
	Lambda-Cyhalothrin	93.7	94.4	116		0.753		
	Malathion	99.8	102	91.9	101	2.20		9.71
	Metalaxyl	93.4	94.3	95.8	84.9	1.02		12.0
	Methoxychlor	96.8	96.8	94.3		0.0310		
	Metolachlor	86.8	87.3			0.548		7.56
	Metribuzin	129	130	124	136	0.446		8.91
	Mevinphos	86.7	85.2	102	105	1.82		3.51
	Mirex	69.6	68.9	85.0		1.12		
	Molinate	78.3	79.0	74.0	81.8	0.795		9.97
	Naled	61.4	63.1	60.3	65.5	2.71		8.28
	Norflurazon	88.6	87.7	75.6	82.8	0.943		9.12
	Oxadiazon	88.4	89.0	74.0	80.8	0.646		8.86
	Parathion Ethyl	93.6	93.3	92.8	99.4	0.277		6.83
	Parathion Methyl	116	116	118	128	0.263		7.83

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Pendimethalin	56.9	56.6	65.7	73.1	0.489		10.5
	Permethrin	97.0	97.3	105		0.307		
	Phenothrin	71.0	70.5	98.4		0.685		
	Phorate	86.9	88.1	102	111	1.43		7.98
	Prallethrin	69.6	68.2	101		1.98		
	Prodiamine	58.3	53.3	87.3	96.4	8.88		9.97
	Prometon	92.9	96.7	85.0	93.7	4.00		9.65
	Prometryn	101	103	95.2	106	1.91		10.5
	Pronamide	105	105	103	108	0.0334		4.29
	Propiconazole	87.6	87.7	72.2	84.5	0.0877		12.8
	Simazine	99.2	102	103	103	2.83		0.553
	Sulfentrazone	82.6	79.5	64.4	72.2	3.76		11.4
	Tebuconazole	24.0	21.0	10.1	10.7	13.1		6.23
	Terbufos	97.3	101	108	115	3.45		6.66
	Terbuthylazine	93.3	94.2	90.7	98.9	1.02		8.63
	Trans-Nonachlor	90.7	92.6	102		2.11		
	Trifluralin	80.1	80.8	83.9		0.934		
EPA 8276	Chlordane	89.4	89.5	82.1	78.1	0.0403		4.55
	Toxaphene	85.4	75.7	87.5	78.8	12.1		10.5
EPA 8321B	2,4-D	109		133	127			3.65
	3-Hydroxycarbofuran	69.1		72.5	74.0			2.02
	Acesulfame K	78.8		122	125			2.50
	Acetaminophen	74.5		79.6	80.1			0.388
	Acetamiprid	83.9		73.9	72.5			1.84
	Afidopyropen	73.0		73.1	68.5			6.42
	Aldicarb	74.6		52.2	53.6			2.63
	Aldicarb Sulfone	83.0		86.2	89.4			3.62
	Aldicarb Sulfoxide	83.0		41.3	38.8			6.34
	AMPA	81.6		94.2	87.9			6.93
	Bentazon	59.3		46.4	43.9			3.81
	Benzovindiflupyr	82.3		77.5	72.2			7.15
	Carbamazepine	73.2		58.0	59.1			1.73
	Carbaryl	51.2		43.3	45.7			5.48
	Carbofuran	50.3		44.8	44.8			0.179
	Clothianidin	86.0		72.1	70.1			2.84
	Dinotefuran	90.6		93.6	91.4			2.44
	Diuron	68.4		53.1	53.6			1.04
	Endothall	98.9		129	124			3.68
	Fenuron	99.8		84.0	82.8			1.55
	Fluridone	109		102	94.7			6.64
	Glufosinate	99.9		92.9	102			9.40
	Glyphosate	97.9		74.4	80.3			7.67
	Hydrocodone	82.2		68.9	70.0			1.62
	Ibuprofen	87.7		82.2	69.8			16.3
	Imazapyr	86.9		95.1	101			3.41
	Imidacloprid	93.9		132	134			1.59
	Linuron	75.5		67.0	61.2			9.00
	Mandestrobin	90.5		79.6	79.0			0.848
	MCPP	131		137	138			0.627
	Methiocarb	51.7		51.5	47.5			8.06
	Methomyl	81.2		84.8	79.6			6.22
	Naproxen	74.7		60.0	64.4			7.14
	Oxamyl	84.4		86.6	84.7			2.23
	Primidone	78.8		82.5	87.8			5.96

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Propoxur	52.9	45.1	47.3		4.64
	Pyraclostrobin	95.6	75.3	74.7		0.825
	Sucralose	89.3	93.6	98.4		5.01
	Thiamethoxam	96.7	104	101		3.31
	Tolfenpyrad	66.0	52.4	57.4		9.00
	Triclopyr	99.8	113	115		2.34
SM 2120 B-2011	Color (true)	99.9			4.02	
	Color (true)	101			9.86	
SM 2320 B-2011	Total Alkalinity	100			1.17	
	Total Alkalinity	102			1.25	
SM 2540 C-2011	TDS				0.784	
SM 4500 F-C-2011	Fluoride	98.2	96.6	96.1		0.464
	Fluoride	100	107	106		0.464
SM 5310 B-2011	Organic Carbon	99.8	97.1	98.0		0.788
	Organic Carbon	97.0	93.0	94.5		0.813

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2184551, 2184554, 2184555, 2184556, 2184563
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2184588, 2184589, 2184590, 2184591
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2184588, 2184589, 2184590, 2184591
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2184551, 2184554, 2184555, 2184556, 2184563
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2184551, 2184554, 2184555, 2184556, 2184563
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2184552, 2184557, 2184558, 2184559, 2184564
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2184552, 2184557, 2184558, 2184559, 2184564
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2184552, 2184557, 2184558, 2184559, 2184564
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2184552, 2184557, 2184558, 2184559, 2184564
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2184553, 2184560, 2184561, 2184562, 2184565
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2184580
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2184581
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2184580
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2184577
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2184578, 2184579
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2184578, 2184579
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2184551, 2184554, 2184555, 2184556, 2184563
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2184551, 2184554, 2184555, 2184556, 2184563
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2184588, 2184589, 2184590, 2184591
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2184551, 2184554, 2184555, 2184556, 2184563
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2184551, 2184554, 2184555, 2184556, 2184563

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2184551, 2184554, 2184555, 2184556, 2184563
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2184552, 2184557, 2184558, 2184559, 2184564

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	07/22/2020			07/22/2020 16:45	Blanca Fach	2184551, 2184554, 2184555, 2184556, 2184563
EPA 200.7 Rev. 4.4	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 17:48	Betina Topolski	2184588
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 17:56	Betina Topolski	2184589
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 18:32	Betina Topolski	2184590
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 18:39	Betina Topolski	2184591
EPA 200.8 Rev. 5.4	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 18:01	Alexander Thompson	2184588
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 18:08	Alexander Thompson	2184589
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 18:16	Alexander Thompson	2184590
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/23/2020 19:02	Alexander Thompson	2184591
	07/22/2020	07/22/2020 16:25	Elliott D. Healy	07/27/2020 12:06	Alexander Thompson	2184588
	07/22/2020	07/27/2020 12:45	Elliott D. Healy	07/30/2020 11:40	Alexander Thompson	2184588
	07/22/2020	07/27/2020 12:45	Elliott D. Healy	07/30/2020 11:44	Alexander Thompson	2184589
	07/22/2020	07/27/2020 12:45	Elliott D. Healy	07/30/2020 11:48	Alexander Thompson	2184590
	07/22/2020	07/27/2020 12:45	Elliott D. Healy	07/30/2020 11:52	Alexander Thompson	2184591
	07/22/2020			07/28/2020 23:52	Julia Storbeck	2184551
EPA 300.0 Rev. 2.1	07/22/2020			07/29/2020 00:28	Julia Storbeck	2184554
	07/22/2020			07/29/2020 00:40	Julia Storbeck	2184555
	07/22/2020			07/29/2020 00:52	Julia Storbeck	2184556
	07/22/2020			07/29/2020 03:05	Julia Storbeck	2184563
	07/22/2020			07/25/2020 12:23	Ping Hua	2184552
EPA 350.1 Rev. 2.0	07/22/2020			07/25/2020 12:24	Ping Hua	2184557
	07/22/2020			07/25/2020 12:26	Ping Hua	2184558
	07/22/2020			07/25/2020 12:32	Ping Hua	2184564
	07/22/2020			07/25/2020 13:00	Ping Hua	2184559
	07/22/2020	07/23/2020 10:20	Sima Feizi	07/24/2020 13:44	Jhamieka S. Greenwood	2184564
EPA 351.2 Rev. 2.0	07/22/2020	07/23/2020 10:20	Sima Feizi	07/24/2020 13:55	Jhamieka S. Greenwood	2184552
	07/22/2020	07/23/2020 10:20	Sima Feizi	07/24/2020 13:57	Jhamieka S. Greenwood	2184557
	07/22/2020	07/23/2020 10:20	Sima Feizi	07/24/2020 13:59	Jhamieka S. Greenwood	2184558
	07/22/2020	07/23/2020 10:20	Sima Feizi	07/24/2020 14:00	Jhamieka S. Greenwood	2184559
	07/22/2020			07/23/2020 09:04	Beverly Y. Sanders	2184552
EPA 353.2 Rev. 2.0	07/22/2020			07/23/2020 09:17	Beverly Y. Sanders	2184558
	07/22/2020			07/23/2020 09:19	Beverly Y. Sanders	2184559
	07/22/2020			07/23/2020 09:20	Beverly Y. Sanders	2184564
	07/22/2020			07/23/2020 10:19	Beverly Y. Sanders	2184557
EPA 365.1 Rev. 2.0	07/22/2020	07/28/2020 10:00	Lipi Saha	07/30/2020 12:47	Benjamin T. Nordmann	2184552
	07/22/2020	07/28/2020 10:00	Lipi Saha	07/30/2020 12:55	Benjamin T. Nordmann	2184557
	07/22/2020	07/28/2020 10:00	Lipi Saha	07/30/2020 12:56	Benjamin T. Nordmann	2184558
	07/22/2020	07/28/2020 10:00	Lipi Saha	07/30/2020 12:57	Benjamin T. Nordmann	2184559
	07/22/2020	07/28/2020 10:00	Lipi Saha	07/30/2020 12:58	Benjamin T. Nordmann	2184564

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	07/22/2020			07/22/2020 14:41	Jhamieka S. Greenwood	2184565
	07/22/2020			07/22/2020 14:44	Jhamieka S. Greenwood	2184553
	07/22/2020			07/22/2020 14:45	Jhamieka S. Greenwood	2184560
	07/22/2020			07/22/2020 14:46	Jhamieka S. Greenwood	2184561
	07/22/2020			07/22/2020 14:47	Jhamieka S. Greenwood	2184562
EPA 8270E	07/22/2020	07/23/2020 08:30	Rasheda Ghaffari	07/27/2020 19:05	Vandana T. Nagar	2184581
	07/22/2020	07/27/2020 08:30	Rasheda Ghaffari	07/29/2020 00:17	Michael Poppell	2184580
EPA 8276	07/22/2020	07/27/2020 08:30	Rasheda Ghaffari	07/31/2020 20:39	Arthur Maknenko	2184580
EPA 8321B	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/22/2020 17:12	Rebecca Ware	2184578
	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/22/2020 17:26	Rebecca Ware	2184579
	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/23/2020 09:51	Mohammad Ghaffari	2184578
	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/23/2020 10:02	Mohammad Ghaffari	2184579
	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/28/2020 08:52	Mohammad Ghaffari	2184578
	07/22/2020	07/22/2020 15:30	Rebecca Ware	07/28/2020 09:04	Mohammad Ghaffari	2184579
	07/22/2020	07/24/2020 09:00	Hoor Shaik	07/28/2020 21:52	Juyoung Kim	2184578
	07/22/2020	07/24/2020 09:00	Hoor Shaik	07/28/2020 22:27	Juyoung Kim	2184579
	07/22/2020	07/27/2020 09:00	Hoor Shaik	07/29/2020 10:35	Juyoung Kim	2184577
SM 2120 B-2011	07/22/2020			07/22/2020 16:15	Benjamin T. Nordmann	2184554
	07/22/2020			07/22/2020 16:16	Benjamin T. Nordmann	2184555
	07/22/2020			07/22/2020 16:20	Benjamin T. Nordmann	2184563
	07/22/2020			07/22/2020 16:21	Benjamin T. Nordmann	2184556
	07/22/2020			07/22/2020 16:45	Benjamin T. Nordmann	2184551
SM 2320 B-2011	07/22/2020			07/23/2020 21:20	Dale L. Simmons	2184563
	07/22/2020			07/23/2020 21:40	Dale L. Simmons	2184555
	07/22/2020			07/23/2020 21:48	Dale L. Simmons	2184556
	07/22/2020			07/25/2020 04:29	Dale L. Simmons	2184551
	07/22/2020			07/25/2020 04:39	Dale L. Simmons	2184554
SM 2340B	07/22/2020			07/23/2020 17:48	Betina Topolski	2184588
	07/22/2020			07/23/2020 17:56	Betina Topolski	2184589
	07/22/2020			07/23/2020 18:32	Betina Topolski	2184590
	07/22/2020			07/23/2020 18:39	Betina Topolski	2184591
SM 2540 C-2011	07/22/2020			07/27/2020 14:36	Yijie Li	2184551, 2184554, 2184555, 2184556, 2184563
SM 2540 D-2011	07/22/2020			07/27/2020 14:36	Yijie Li	2184551, 2184554, 2184555, 2184556, 2184563
SM 4500 F-C-2011	07/22/2020			07/23/2020 20:11	Dale L. Simmons	2184551
	07/22/2020			07/23/2020 20:23	Dale L. Simmons	2184554
	07/22/2020			07/23/2020 21:09	Dale L. Simmons	2184563
	07/22/2020			07/23/2020 21:40	Dale L. Simmons	2184555
	07/22/2020			07/23/2020 21:48	Dale L. Simmons	2184556

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	07/22/2020			07/27/2020 22:53	David Boose	2184552
	07/22/2020			07/27/2020 23:05	David Boose	2184557
	07/22/2020			07/27/2020 23:17	David Boose	2184558
	07/22/2020			07/28/2020 01:07	David Boose	2184559
	07/22/2020			07/28/2020 01:19	David Boose	2184564