

Chemical Analysis Report

NE-DIST-2020-12-03-01

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

Event Description: **Moses SCI, St.Marys**
Request ID: **RQ-2020-11-16-12**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 28-DEC-2020 12:16

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the "T" and a long horizontal stroke at the end.

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: Deep Creek 1.25 Miles North of Pine Island Rd Collection Date/Time: 12/02/2020 12:15

Field ID: G5NE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2210431	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P390671	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P390745	
		Sulfate	27		mg SO4/L	P390747	
	SM 2120 B-2011	Color (true)	400		PCU	P390674	
	SM 2320 B-2011	Total Alkalinity	74		mg CaCO3/L	P390805	
	SM 2540 C-2011	TDS	281		mg/L	P391145	
	SM 2540 D-2011	TSS	2	I	mg/L	P390954	
	SM 4500 F-C-2011	Fluoride	0.043	I	mg F/L	P390806	
2210432	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P391077	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P391506	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P390821	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P390783	
	SM 5310 B-2011	Organic Carbon	45		mg C/L	P390896	
2210433	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P390661	
2210437	EPA 8321B	2,4-D	0.0020	U	ug/L	P390642	
		Acesulfame K**	0.10	U	ug/L	P390748	MS
		AMPA**	0.10	U	ug/L	P390748	
		Sucralose**	1.4		ug/L	P390748	
		Acetaminophen**	0.0080	U	ug/L	P390642	
		Acetamiprid**	0.0020	U	ug/L	P390642	
		Endothall**	0.25	U	ug/L	P390748	
		Glufosinate**	0.10	U	ug/L	P390748	
		Glyphosate**	0.10	U	ug/L	P390748	
		Afidopyropen**	0.0020	U	ug/L	P390642	
		Bentazon	0.076		ug/L	P390642	
		Benzovindiflupyr**	0.0020	U	ug/L	P390642	
		Carbamazepine**	8.0E-04	U	ug/L	P390642	
		Clothianidin**	0.0020	U	ug/L	P390642	
		Dinotefuran**	0.0020	U	ug/L	P390642	
		Diuron	0.0020	U	ug/L	P390642	
		Fenuron	0.016	U	ug/L	P390642	
		Fluridone**	8.0E-04	U	ug/L	P390642	
		Imazapyr**	0.020		ug/L	P390642	
		Hydrocodone**	0.0020	U	ug/L	P390642	
		Ibuprofen**	0.020	U	ug/L	P390642	
		Imidacloprid	0.0020	U	ug/L	P390642	
		Linuron	0.0040	U	ug/L	P390642	
		Mandestrobin**	0.0020	U	ug/L	P390642	
		MCP	0.0020	U	ug/L	P390642	
		Naproxen**	0.0080	U	ug/L	P390642	
		Primidone**	0.0040	U	ug/L	P390642	
		Pyraclostrobin**	0.0020	U	ug/L	P390642	
		Thiamethoxam**	0.0020	U	ug/L	P390642	

Field ID: G5NE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2210437	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P390642	
		Triclopyr**	0.0040	U	ug/L	P390642	
2210438	EPA 200.7 Rev. 4.4	Barium	16.7		ug/L	P390778	
		Calcium	48.3		mg/L	P390778	
		Iron	1.01E+03		ug/L	P390778	
		Magnesium	3.87		mg/L	P390778	
		Potassium	1.1	I	mg/L	P390778	
		Sodium	27.0		mg/L	P390778	
		Zinc	5.0	U	ug/L	P390778	
	EPA 200.8 Rev. 5.4	Aluminum	896		ug/L	P390778	
		Antimony	0.050	U	ug/L	P390778	
		Arsenic	0.30		ug/L	P390778	
		Beryllium	0.052		ug/L	P390778	
		Boron**	20.8		ug/L	P390778	
		Cadmium	0.020	U	ug/L	P390778	
		Chromium	0.49	I	ug/L	P390778	
		Copper	0.40	U	ug/L	P391112	
		Lead	0.24	I	ug/L	P390778	
		Nickel	0.88	I	ug/L	P390778	
		Selenium	0.20	U	ug/L	P390778	
		Silver	0.010	U	ug/L	P390778	
		Thallium	0.10	U	ug/L	P390778	
	SM 2340B	Hardness	137		mg/L	P390778	
2210439	EPA 8270E	Acetochlor	0.25	U	ng/L	P390676	
		Alachlor	0.25	U	ng/L	P390676	
		Ametryn	0.60	U	ng/L	P390676	
		Atrazine	0.25	U	ng/L	P390676	
		Atrazine Desethyl	1.5	U	ng/L	P390676	
		Azinphos Methyl	2.0	U	ng/L	P390676	
		Azoxystrobin**	0.50	U	ng/L	P390676	
		Bromacil	0.50	U	ng/L	P390676	
		Butylate	0.40	U	ng/L	P390676	
		Carbophenothion	0.50	U	ng/L	P390676	
		Carfentrazone Ethyl**	0.10	U	ng/L	P390676	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P390676	
		Chlorpyrifos Methyl	0.050	U	ng/L	P390676	
		Cyanazine	3.3	U	ng/L	P390676	
		Demeton	1.5	U	ng/L	P390676	
		Diazinon	0.13	U	ng/L	P390676	
		Difenoconazole**	0.60	U	ng/L	P390676	
		Dimethenamid**	0.10	U	ng/L	P390676	
		Disulfoton	0.50	U	ng/L	P390676	
		Dithiopyr**	0.10	U	ng/L	P390676	
		EPTC	1.3	U	ng/L	P390676	
		Ethion	0.15	U	ng/L	P390676	

Field ID: G5NE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2210439	EPA 8270E	Ethoprop	0.10	U	ng/L	P390676	
		Fenamiphos	0.50	U	ng/L	P390676	
		Fenbuconazole**	0.13	U	ng/L	P390676	
		Fipronil	0.25	U	ng/L	P390676	
		Fipronil Desulfinyl**	0.13	U	ng/L	P390676	
		Fipronil Sulfide	0.15	U	ng/L	P390676	
		Fipronil Sulfone	0.15	U	ng/L	P390676	
		Fluazifop-P-butyl**	0.10	U	ng/L	P390676	
		Fludioxonil**	0.13	U	ng/L	P390676	
		Flumioxazin**	1.8	U	ng/L	P390676	
		Flutolanil**	0.10	U	ng/L	P390676	
		Fluxapyroxad**	0.10	U	ng/L	P390676	
		Fonofos	0.20	U	ng/L	P390676	
		Hexazinone	0.50	U	ng/L	P390676	
		Imazalil**	0.76	U	ng/L	P390676	
		Iprodione**	0.60	U	ng/L	P390676	
		Malathion	0.35	U	ng/L	P390676	
		Metalaxyl	0.76	U	ng/L	P390676	
		Metolachlor	0.50	U	ng/L	P390676	
		Metribuzin	3.3	U	ng/L	P390676	
		Mevinphos	0.50	U	ng/L	P390676	
		Molinate	0.30	U	ng/L	P390676	
		Myclobutanil**	0.25	U	ng/L	P390676	
		Naled**	1.5	U	ng/L	P390676	
		Norflurazon	0.50	U	ng/L	P390676	
		Oxadiazon	0.10	U	ng/L	P390676	
		Oxyfluorfen**	0.15	U	ng/L	P390676	
		Parathion Ethyl	0.25	U	ng/L	P390676	
		Parathion Methyl	0.55	U	ng/L	P390676	
		Pendimethalin	1.0	U	ng/L	P390676	
		Phorate	0.25	UJ	ng/L	P390676	LCS
		Prodiamine**	0.18	UJ	ng/L	P390676	RPD
		Prometon	0.91	U	ng/L	P390676	
		Prometryn	0.20	U	ng/L	P390676	
		Pronamide**	0.15	U	ng/L	P390676	
		Propiconazole**	0.50	U	ng/L	P390676	
		Pyriproxyfen**	0.13	U	ng/L	P390676	
		Simazine	0.50	U	ng/L	P390676	
		Sulfentrazone**	0.50	U	ng/L	P390676	
		Tebuconazole**	0.50	U	ng/L	P390676	
		Terbufos	0.10	U	ng/L	P390676	
		Terbuthylazine	0.43	U	ng/L	P390676	

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: MS accuracy for dimethenamid 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390671

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390778

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: P390778

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
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391112

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390745

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390747

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: P391077

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390821

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390783

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390661

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

Reference Method: EPA 8270E
Batch ID: P390676

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
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	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
Difenoconazole	0.60	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P390676

Component	Result	Code	Units
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	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
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	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
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Oxyfluorfen	0.15	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
Pyriproxyfen	0.12	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 8321B
Batch ID: P390642

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P390642

Component	Result	Code	Units
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: P390748

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: SM 2120 B-2011
Batch ID: P390674

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P390805

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

Reference Method: SM 2540 C-2011
Batch ID: P391145

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P390954

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390806

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P390896

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: P390778

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	105		P	85 - 115
Iron	101		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	95.6		P	85 - 115
Sodium	97.3		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390778

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.5		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	93.8		P	85 - 115
Boron	97.2		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	96.0		P	85 - 115
Lead	106		P	85 - 115
Nickel	109		P	85 - 115
Selenium	103		P	85 - 115
Silver	103		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	94.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390745

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390747

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391077

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390821

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390783

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390661

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

Reference Method: EPA 8270E
Batch ID: P390676

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	104	105	P/P	71 - 122
Alachlor	96.5	95.9	P/P	70 - 121
Ametryn	108	103	P/P	49 - 137
Atrazine	96.8	97.0	P/P	76 - 125
Atrazine Desethyl	82.4	87.3	P/P	31 - 144
Azinphos Methyl	134	130	P/P	67 - 150
Azoxystrobin	148	138	P/P	70 - 170
Bromacil	86.2	89.8	P/P	36 - 121
Butylate	76.3	71.0	P/P	33 - 88.0
Carbophenothion	97.2	94.7	P/P	66 - 116
Carfentrazone Ethyl	111	116	P/P	50 - 150
Chlorpyrifos Ethyl	99.8	93.4	P/P	73 - 117
Chlorpyrifos Methyl	102	99.1	P/P	68 - 121
Cyanazine	114	111	P/P	20 - 250
Demeton	88.8	81.3	P/P	30 - 123
Diazinon	104	102	P/P	70 - 128
Difenoconazole	130	128	P/P	50 - 150
Dimethenamid	94.3	88.4	P/P	66 - 122
Disulfoton	95.0	97.9	P/P	46 - 124
Dithiopyr	88.9	86.2	P/P	69 - 122
EPTC	69.1	68.6	P/P	31 - 90.0
Ethion	89.2	81.7	P/P	45 - 135
Ethoprop	94.7	92.5	P/P	59 - 118
Fenamiphos	93.9	87.3	P/P	30 - 136
Fenbuconazole	106	103	P/P	50 - 150
Fipronil	103	102	P/P	57 - 127
Fipronil Desulfinyl	103	101	P/P	51 - 122
Fipronil Sulfide	93.2	92.2	P/P	57 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P390676

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfone	85.7	81.9	P/P	51 - 119
Fluazifop-P-butyl	98.9	96.9	P/P	50 - 150
Fludioxonil	106	104	P/P	50 - 150
Flumioxazin	110	102	P/P	20 - 250
Flutolanil	108	102	P/P	50 - 150
Fluxapyroxad	92.1	90.8	P/P	50 - 150
Fonofos	91.6	92.8	P/P	60 - 120
Hexazinone	89.5	87.7	P/P	57 - 142
Imazalil	100	106	P/P	30 - 139
Iprodione	99.1	93.5	P/P	50 - 150
Malathion	90.3	87.4	P/P	67 - 128
Metaxyl	98.1	95.8	P/P	21 - 148
Metolachlor	99.0	97.9	P/P	70 - 120
Metribuzin	102	106	P/P	20 - 250
Mevinphos	103	104	P/P	47 - 116
Molinate	79.6	77.9	P/P	41 - 99.0
Myclobutanil	97.7	95.9	P/P	50 - 150
Naled	55.7	56.3	P/P	38 - 97.0
Norflurazon	95.4	87.9	P/P	54 - 127
Oxadiazon	93.8	91.8	P/P	65 - 122
Oxyfluorfen	109	103	P/P	50 - 150
Parathion Ethyl	90.0	90.3	P/P	71 - 113
Parathion Methyl	120	114	P/P	73 - 129
Pendimethalin	92.1	88.6	P/P	63 - 130
Phorate	104	119	P/F	48 - 118
Prodiamine	28.6	78.7	P/P	20 - 144
Prometon	85.6	90.4	P/P	53 - 120
Prometryn	107	106	P/P	63 - 119
Pronamide	104	101	P/P	81 - 122
Propiconazole	106	105	P/P	62 - 124
Pyriproxyfen	94.6	90.3	P/P	50 - 150
Simazine	103	102	P/P	77 - 129
Sulfentrazone	80.9	80.0	P/P	20 - 137
Tebuconazole	64.5	55.2	P/P	20 - 118
Terbufos	93.7	92.1	P/P	61 - 119
Terbuthylazine	93.1	93.7	P/P	75 - 119

Reference Method: EPA 8321B
Batch ID: P390642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	73.4		P	30 - 160
Acetaminophen	68.6		P	30 - 150
Acetamiprid	78.3		P	30 - 160
Afidopyropen	60.4		P	30 - 160
Bentazon	34.6		P	30 - 150
Benzovindiflupyr	81.5		P	30 - 160
Carbamazepine	59.5		P	30 - 160
Clothianidin	78.6		P	30 - 160
Dinotefuran	76.5		P	30 - 160
Diuron	59.0		P	30 - 160
Fenuron	85.6		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P390642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	68.9		P	30 - 160
Hydrocodone	83.1		P	30 - 160
Ibuprofen	50.0		P	30 - 160
Imazapyr	67.2		P	30 - 160
Imidacloprid	80.2		P	30 - 160
Linuron	60.8		P	30 - 160
Mandestrobin	77.8		P	30 - 160
MCPP	96.7		P	30 - 160
Naproxen	48.2		P	30 - 160
Primidone	74.3		P	30 - 160
Pyraclostrobin	55.4		P	30 - 160
Thiamethoxam	81.1		P	30 - 160
Tolfenpyrad	50.9		P	30 - 160
Triclopyr	77.4		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P390748

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	114		P	40 - 150
AMPA	75.6		P	40 - 150
Endothall	78.0		P	40 - 150
Glufosinate	109		P	40 - 150
Glyphosate	96.7		P	40 - 140
Sucralose	99.1		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P390674

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

Reference Method: SM 2320 B-2011
Batch ID: P390805

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

Reference Method: SM 4500 F-C-2011
Batch ID: P390806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P390896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210227	Barium	104	105	P/P	80 - 120
2210227	Calcium	106		P	80 - 120
2210227	Iron	108	109	P/P	80 - 120
2210227	Magnesium	108	108	P/P	80 - 120
2210227	Potassium	98.4	97.0	P/P	80 - 120
2210227	Sodium	98.4		P	80 - 120
2210227	Zinc	108	108	P/P	80 - 120
2210800	Barium	107		P	80 - 120
2210800	Calcium	109		P	80 - 120
2210800	Iron	97.7		P	80 - 120
2210800	Magnesium	107		P	80 - 120
2210800	Potassium	98.7		P	80 - 120
2210800	Sodium	97.5		P	80 - 120
2210800	Zinc	108		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210227	Aluminum	96.6	97.5	P/P	80 - 120
2210227	Antimony	97.1	99.3	P/P	80 - 120
2210227	Arsenic	95.3	96.7	P/P	80 - 120
2210227	Beryllium	90.7	93.2	P/P	80 - 120
2210227	Boron	92.9	92.7	P/P	80 - 120
2210227	Cadmium	96.2	97.0	P/P	80 - 120
2210227	Chromium	90.5	92.1	P/P	80 - 120
2210227	Lead	98.5	102	P/P	80 - 120
2210227	Nickel	95.0	96.2	P/P	80 - 120
2210227	Selenium	93.6	94.5	P/P	80 - 120
2210227	Silver	99.0	96.6	P/P	80 - 120
2210227	Thallium	96.6	101	P/P	80 - 120
2210800	Aluminum	97.5		P	80 - 120
2210800	Antimony	98.2		P	80 - 120
2210800	Arsenic	96.1		P	80 - 120
2210800	Beryllium	91.5		P	80 - 120
2210800	Boron	95.9		P	80 - 120
2210800	Cadmium	98.5		P	80 - 120
2210800	Chromium	92.7		P	80 - 120
2210800	Lead	105		P	80 - 120
2210800	Nickel	96.1		P	80 - 120
2210800	Selenium	82.0		P	80 - 120
2210800	Silver	99.1		P	80 - 120
2210800	Thallium	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391112

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210214	Copper	92.3		P	80 - 120
2210228	Copper	96.1	95.2	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209894	Chloride	102		P	90 - 110
2210222	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209894	Sulfate	101		P	90 - 110
2210222	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210513	Ammonia-N	95.8	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212524	Kjeldahl Nitrogen	96.4	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210398	NO2NO3-N	96.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210223	Total-P	106	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210268	O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P390676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210290	Acetochlor	110	100	P/P	68 - 126
2210290	Alachlor	98.7	89.2	P/P	66 - 125
2210290	Ametryn	97.7	96.8	P/P	31 - 182
2210290	Atrazine	97.3	91.1	P/P	68 - 137
2210290	Atrazine Desethyl	69.9	72.6	P/P	13 - 161
2210290	Azinphos Methyl	122	115	P/P	54 - 162
2210290	Azoxystrobin	143	132	P/P	70 - 170
2210290	Bromacil	87.0	79.9	P/P	34 - 144

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P390676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210290	Butylate	69.1	57.7	P/P	16 - 92.0
2210290	Carbophenothion	93.3	91.0	P/P	30 - 131
2210290	Carfentrazone Ethyl	112	104	P/P	50 - 150
2210290	Chlorpyrifos Ethyl	97.8	93.7	P/P	63 - 124
2210290	Chlorpyrifos Methyl	103	98.0	P/P	64 - 125
2210290	Cyanazine	113	112	P/P	13 - 245
2210290	Demeton	81.7	84.2	P/P	20 - 154
2210290	Diazinon	107	103	P/P	66 - 141
2210290	Difenoconazole	133	123	P/P	50 - 150
2210290	Disulfoton	97.4	96.9	P/P	55 - 130
2210290	Dithiopyr	88.8	84.1	P/P	66 - 122
2210290	EPTC	67.0	63.2	P/P	15 - 93.0
2210290	Ethion	85.8	82.5	P/P	15 - 148
2210290	Ethoprop	96.6	94.7	P/P	59 - 126
2210290	Fenamiphos	87.4	87.0	P/P	39 - 137
2210290	Fenbuconazole	107	101	P/P	50 - 150
2210290	Fipronil	106	98.6	P/P	47 - 131
2210290	Fipronil Desulfinyl	106	101	P/P	43 - 121
2210290	Fipronil Sulfide	95.1	88.0	P/P	29 - 134
2210290	Fipronil Sulfone	83.3	75.6	P/P	19 - 131
2210290	Fluazifop-P-butyl	99.5	94.6	P/P	50 - 150
2210290	Fludioxonil	105	91.7	P/P	50 - 150
2210290	Flumioxazin	105	93.0	P/P	10 - 300
2210290	Flutolanil	105	97.4	P/P	50 - 150
2210290	Fluxapyroxad	93.8	83.1	P/P	50 - 150
2210290	Fonofos	95.2	99.0	P/P	62 - 128
2210290	Hexazinone	91.7	87.0	P/P	58 - 154
2210290	Imazalil	107	102	P/P	10 - 215
2210290	Iprodione	90.1	87.6	P/P	50 - 150
2210290	Malathion	87.3	81.5	P/P	54 - 135
2210290	Metalaxyl	101	92.9	P/P	46 - 136
2210290	Metolachlor	102	93.7	P/P	62 - 126
2210290	Metribuzin	108	103	P/P	44 - 277
2210290	Mevinphos	101	98.0	P/P	44 - 135
2210290	Molinate	76.7	72.7	P/P	31 - 104
2210290	Myclobutanil	93.4	91.3	P/P	50 - 150
2210290	Naled	54.7	51.9	P/P	33 - 113
2210290	Norflurazon	87.9	84.2	P/P	32 - 134
2210290	Oxadiazon	95.6	89.3	P/P	55 - 123
2210290	Oxyfluorfen	115	109	P/P	50 - 150
2210290	Parathion Ethyl	94.0	92.1	P/P	67 - 120
2210290	Parathion Methyl	119	113	P/P	70 - 140
2210290	Pendimethalin	96.5	95.1	P/P	59 - 145
2210290	Phorate	108	99.2	P/P	52 - 127
2210290	Prodiamine	70.3	48.9	P/P	11 - 157
2210290	Prometon	94.9	89.3	P/P	55 - 130
2210290	Prometryn	109	104	P/P	55 - 127
2210290	Pronamide	106	98.2	P/P	66 - 150
2210290	Propiconazole	109	98.5	P/P	14 - 178
2210290	Pyriproxyfen	98.5	88.1	P/P	50 - 150
2210290	Simazine	101	97.5	P/P	58 - 159
2210290	Sulfentrazone	77.8	76.3	P/P	21 - 144

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P390676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210290	Tebuconazole	56.6	47.2	P/P	10 - 122
2210290	Terbufos	99.9	99.0	P/P	65 - 131
2210290	Terbutylazine	97.1	92.9	P/P	63 - 131

Reference Method: EPA 8321B
Batch ID: P390642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210417	2,4-D	84.2	84.9	P/P	30 - 160
2210417	Acetaminophen	57.2	62.7	P/P	30 - 150
2210417	Acetamiprid	70.5	73.1	P/P	30 - 160
2210417	Afidopyropen	54.4	57.1	P/P	30 - 160
2210417	Bentazon	48.9	49.9	P/P	30 - 150
2210417	Benzovindiflupyr	88.1	78.9	P/P	30 - 160
2210417	Carbamazepine	57.1	57.5	P/P	30 - 160
2210417	Clothianidin	56.0	56.4	P/P	30 - 160
2210417	Dinotefuran	88.7	89.4	P/P	30 - 160
2210417	Diuron	57.6	54.6	P/P	30 - 160
2210417	Fenuron	78.7	82.7	P/P	30 - 160
2210417	Fluridone	69.4	69.7	P/P	30 - 160
2210417	Hydrocodone	125	118	P/P	30 - 160
2210417	Ibuprofen	49.7	48.4	P/P	30 - 160
2210417	Imazapyr	67.4	58.2	P/P	30 - 160
2210417	Imidacloprid	100	89.0	P/P	30 - 160
2210417	Linuron	57.9	54.1	P/P	30 - 160
2210417	Mandestrobin	80.6	83.2	P/P	30 - 160
2210417	MCPP	100	97.5	P/P	30 - 160
2210417	Naproxen	51.3	41.6	P/P	30 - 160
2210417	Primidone	57.2	55.4	P/P	30 - 160
2210417	Pyraclostrobin	56.4	58.4	P/P	30 - 160
2210417	Thiamethoxam	103	98.0	P/P	30 - 160
2210417	Tolfenpyrad	51.4	49.6	P/P	30 - 160
2210417	Triclopyr	93.6	72.5	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P390748

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210272	Acesulfame K	137	160	P/F	40 - 150
2210272	AMPA	89.8	91.0	P/P	40 - 150
2210272	Endothall	109	112	P/P	40 - 150
2210272	Glufosinate	100	105	P/P	40 - 150
2210272	Glyphosate	87.1	88.6	P/P	40 - 140
2210272	Sucralose	96.3	102	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P390806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210201	Fluoride	98.7	98.7	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P390896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210395	Organic Carbon	96.9	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210400	Turbidity	6.80	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210227	Barium	0.639	Spike	P	0 - 20
2210227	Calcium	2.70	Spike	P	0 - 20
2210227	Iron	0.969	Spike	P	0 - 20
2210227	Magnesium	0.289	Spike	P	0 - 20
2210227	Potassium	1.33	Spike	P	0 - 20
2210227	Sodium	0.0263	Spike	P	0 - 20
2210227	Zinc	0.519	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210227	Aluminum	0.962	Spike	P	0 - 20
2210227	Antimony	2.27	Spike	P	0 - 20
2210227	Arsenic	1.44	Spike	P	0 - 20
2210227	Beryllium	2.67	Spike	P	0 - 20
2210227	Boron	0.189	Spike	P	0 - 20
2210227	Cadmium	0.852	Spike	P	0 - 20
2210227	Chromium	1.72	Spike	P	0 - 20
2210227	Lead	3.00	Spike	P	0 - 20
2210227	Nickel	1.33	Spike	P	0 - 20
2210227	Selenium	0.932	Spike	P	0 - 20
2210227	Silver	2.43	Spike	P	0 - 20
2210227	Thallium	4.08	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210228	Copper	0.946	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209894	Chloride	0.708	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209894	Sulfate	1.13	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210513	Ammonia-N	0.122	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212524	Kjeldahl Nitrogen	0.775	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210398	NO2NO3-N	0.169	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210223	Total-P	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210268	O-Phosphate-P	0.504	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P390676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210290	Acetochlor	9.44	Spike	P	0 - 30
2210290	Alachlor	10.0	Spike	P	0 - 30
2210290	Ametryn	0.833	Spike	P	0 - 30
2210290	Atrazine	6.07	Spike	P	0 - 30
2210290	Atrazine Desethyl	3.73	Spike	P	0 - 30
2210290	Azinphos Methyl	5.58	Spike	P	0 - 30
2210290	Azoxystrobin	7.54	Spike	P	0 - 30
2210290	Bromacil	8.59	Spike	P	0 - 30
2210290	Butylate	17.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210290	Carbophenothion	2.56	Spike	P	0 - 30
2210290	Carfentrazone Ethyl	7.61	Spike	P	0 - 30
2210290	Chlorpyrifos Ethyl	4.25	Spike	P	0 - 30
2210290	Chlorpyrifos Methyl	4.52	Spike	P	0 - 30
2210290	Cyanazine	1.09	Spike	P	0 - 30
2210290	Demeton	3.07	Spike	P	0 - 30
2210290	Diazinon	3.75	Spike	P	0 - 30
2210290	Difenoconazole	7.23	Spike	P	0 - 30
2210290	Dimethenamid	6.18	Spike	P	0 - 30
2210290	Disulfoton	0.574	Spike	P	0 - 30
2210290	Dithiopyr	5.01	Spike	P	0 - 30
2210290	EPTC	5.84	Spike	P	0 - 30
2210290	Ethion	3.90	Spike	P	0 - 30
2210290	Ethoprop	1.97	Spike	P	0 - 30
2210290	Fenamiphos	0.440	Spike	P	0 - 30
2210290	Fenbuconazole	5.22	Spike	P	0 - 30
2210290	Fipronil	7.08	Spike	P	0 - 30
2210290	Fipronil Desulfinyl	5.56	Spike	P	0 - 30
2210290	Fipronil Sulfide	7.70	Spike	P	0 - 30
2210290	Fipronil Sulfone	9.75	Spike	P	0 - 30
2210290	Fluazifop-P-butyl	5.00	Spike	P	0 - 30
2210290	Fludioxonil	13.4	Spike	P	0 - 30
2210290	Flumioxazin	11.7	Spike	P	0 - 30
2210290	Flutolanil	7.48	Spike	P	0 - 30
2210290	Fluxapyroxad	9.42	Spike	P	0 - 30
2210290	Fonofos	3.89	Spike	P	0 - 30
2210290	Hexazinone	4.64	Spike	P	0 - 30
2210290	Imazalil	4.42	Spike	P	0 - 30
2210290	Iprodione	2.72	Spike	P	0 - 30
2210290	Malathion	6.92	Spike	P	0 - 30
2210290	Metalaxyl	8.22	Spike	P	0 - 30
2210290	Metolachlor	8.20	Spike	P	0 - 30
2210290	Metribuzin	4.07	Spike	P	0 - 30
2210290	Mevinphos	2.78	Spike	P	0 - 30
2210290	Molinate	5.35	Spike	P	0 - 30
2210290	Myclobutanil	1.97	Spike	P	0 - 30
2210290	Naled	5.29	Spike	P	0 - 30
2210290	Norflurazon	3.52	Spike	P	0 - 30
2210290	Oxadiazon	6.84	Spike	P	0 - 30
2210290	Oxyfluorfen	5.39	Spike	P	0 - 30
2210290	Parathion Ethyl	2.07	Spike	P	0 - 30
2210290	Parathion Methyl	4.50	Spike	P	0 - 30
2210290	Pendimethalin	1.41	Spike	P	0 - 30
2210290	Phorate	8.44	Spike	P	0 - 30
2210290	Prodiamine	35.9	Spike	F	0 - 30
2210290	Prometon	6.06	Spike	P	0 - 30
2210290	Prometryn	4.34	Spike	P	0 - 30
2210290	Pronamide	7.59	Spike	P	0 - 30
2210290	Propiconazole	8.53	Spike	P	0 - 30
2210290	Pyriproxyfen	11.2	Spike	P	0 - 30
2210290	Simazine	3.90	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210290	Sulfentrazone	1.94	Spike	P	0 - 30
2210290	Tebuconazole	18.1	Spike	P	0 - 30
2210290	Terbufos	0.929	Spike	P	0 - 30
2210290	Terbutylazine	4.42	Spike	P	0 - 30
LFB	Acetochlor	0.722	LCS	P	0 - 30
LFB	Alachlor	0.616	LCS	P	0 - 30
LFB	Ametryn	4.00	LCS	P	0 - 30
LFB	Atrazine	0.142	LCS	P	0 - 30
LFB	Atrazine Desethyl	5.70	LCS	P	0 - 30
LFB	Azinphos Methyl	3.42	LCS	P	0 - 30
LFB	Azoxystrobin	6.76	LCS	P	0 - 30
LFB	Bromacil	4.11	LCS	P	0 - 30
LFB	Butylate	7.14	LCS	P	0 - 30
LFB	Carbophenothion	2.57	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.75	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.60	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.13	LCS	P	0 - 30
LFB	Cyanazine	2.43	LCS	P	0 - 30
LFB	Demeton	8.79	LCS	P	0 - 30
LFB	Diazinon	2.64	LCS	P	0 - 30
LFB	Difenoconazole	1.29	LCS	P	0 - 30
LFB	Dimethenamid	6.43	LCS	P	0 - 30
LFB	Disulfoton	3.01	LCS	P	0 - 30
LFB	Dithiopyr	3.01	LCS	P	0 - 30
LFB	EPTC	0.652	LCS	P	0 - 30
LFB	Ethion	8.71	LCS	P	0 - 30
LFB	Ethoprop	2.30	LCS	P	0 - 30
LFB	Fenamiphos	7.27	LCS	P	0 - 30
LFB	Fenbuconazole	2.59	LCS	P	0 - 30
LFB	Fipronil	0.843	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	1.43	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.03	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.59	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	2.07	LCS	P	0 - 30
LFB	Fludioxonil	2.14	LCS	P	0 - 30
LFB	Flumioxazin	7.23	LCS	P	0 - 30
LFB	Flutolanil	5.34	LCS	P	0 - 30
LFB	Fluxapyroxad	1.43	LCS	P	0 - 30
LFB	Fonofos	1.27	LCS	P	0 - 30
LFB	Hexazinone	2.05	LCS	P	0 - 30
LFB	Imazalil	5.72	LCS	P	0 - 30
LFB	Iprodione	5.82	LCS	P	0 - 30
LFB	Malathion	3.30	LCS	P	0 - 30
LFB	Metalaxyl	2.39	LCS	P	0 - 30
LFB	Metolachlor	1.13	LCS	P	0 - 30
LFB	Metribuzin	3.67	LCS	P	0 - 30
LFB	Mevinphos	0.413	LCS	P	0 - 30
LFB	Molinate	2.18	LCS	P	0 - 30
LFB	Myclobutanil	1.91	LCS	P	0 - 30
LFB	Naled	1.19	LCS	P	0 - 30
LFB	Norflurazon	8.18	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Oxadiazon	2.05	LCS	P	0 - 30
LFB	Oxyfluorfen	5.48	LCS	P	0 - 30
LFB	Parathion Ethyl	0.312	LCS	P	0 - 30
LFB	Parathion Methyl	4.97	LCS	P	0 - 30
LFB	Pendimethalin	3.87	LCS	P	0 - 30
LFB	Phorate	14.0	LCS	P	0 - 30
LFB	Prodiamine	93.5	LCS	F	0 - 30
LFB	Prometon	5.44	LCS	P	0 - 30
LFB	Prometryn	1.25	LCS	P	0 - 30
LFB	Pronamide	2.21	LCS	P	0 - 30
LFB	Propiconazole	0.631	LCS	P	0 - 30
LFB	Pyriproxyfen	4.61	LCS	P	0 - 30
LFB	Simazine	0.706	LCS	P	0 - 30
LFB	Sulfentrazone	1.18	LCS	P	0 - 30
LFB	Tebuconazole	15.6	LCS	P	0 - 30
LFB	Terbufos	1.73	LCS	P	0 - 30
LFB	Terbutylazine	0.662	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P390642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210417	2,4-D	0.779	Spike	P	0 - 30
2210417	Acetaminophen	9.28	Spike	P	0 - 30
2210417	Acetamiprid	3.61	Spike	P	0 - 30
2210417	Afidopyropen	4.84	Spike	P	0 - 30
2210417	Bentazon	1.79	Spike	P	0 - 30
2210417	Benzovindiflupyr	11.0	Spike	P	0 - 30
2210417	Carbamazepine	0.726	Spike	P	0 - 30
2210417	Clothianidin	0.821	Spike	P	0 - 30
2210417	Dinotefuran	0.763	Spike	P	0 - 30
2210417	Diuron	5.23	Spike	P	0 - 30
2210417	Fenuron	4.91	Spike	P	0 - 30
2210417	Fluridone	0.368	Spike	P	0 - 30
2210417	Hydrocodone	6.31	Spike	P	0 - 30
2210417	Ibuprofen	2.63	Spike	P	0 - 30
2210417	Imazapyr	13.3	Spike	P	0 - 30
2210417	Imidacloprid	10.4	Spike	P	0 - 30
2210417	Linuron	6.79	Spike	P	0 - 30
2210417	Mandestrobin	3.18	Spike	P	0 - 30
2210417	MCPP	2.58	Spike	P	0 - 30
2210417	Naproxen	20.9	Spike	P	0 - 30
2210417	Primidone	3.19	Spike	P	0 - 30
2210417	Pyraclostrobin	3.54	Spike	P	0 - 30
2210417	Thiamethoxam	5.22	Spike	P	0 - 30
2210417	Tolfenpyrad	3.53	Spike	P	0 - 30
2210417	Triclopyr	25.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P390748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210272	Acesulfame K	15.9	Spike	P	0 - 30
2210272	AMPA	1.26	Spike	P	0 - 30
2210272	Endothall	3.35	Spike	P	0 - 30
2210272	Glufosinate	4.12	Spike	P	0 - 30
2210272	Glyphosate	1.77	Spike	P	0 - 30
2210272	Sucralose	5.49	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P390674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210394	Color (true)	1.95	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P390805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210201	Total Alkalinity	0.715	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P391145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210266	TDS	0.943	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P390806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210201	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P390896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210395	Organic Carbon	0.218	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2210437
Field Sample ID: G5NE0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	61.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	61.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	33.5	P	30 - 160
EPA 8321B	Diuron-d6	39.4	P	30 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	61.5	P	30 - 160
EPA 8321B	Primidone-d5	43.1	P	30 - 160
EPA 8321B	Primidone-d5	43.1	P	30 - 160
EPA 8321B	Sucralose-d6	97.8	P	30 - 160
EPA 8321B	Sucralose-d6	97.8	P	30 - 160

Lab Sample ID: 2210439
Field Sample ID: G5NE0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	92.7	P	72 - 135
EPA 8270E	Terbufos-d10	93.4	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102399

Included Lab Sample IDs: 2210433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	99.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102402

Included Lab Sample IDs: 2210431

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	104	104	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A102404

Included Lab Sample IDs: 2210431

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102409

Included Lab Sample IDs: 2210431

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

Reference Method: SM 2320 B-2011

Run ID: A102458

Included Lab Sample IDs: 2210431

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

Reference Method: SM 4500 F-C-2011

Run ID: A102458

Included Lab Sample IDs: 2210431

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102464

Included Lab Sample IDs: 2210432

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

Reference Method: EPA 8321B

Run ID: A102470

Included Lab Sample IDs: 2210437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	107	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A102470
 Included Lab Sample IDs: 2210437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.6	76.9	P/P	60 - 160
Endothall	79.2	102	P/P	60 - 160
Glufosinate	101	105	P/P	60 - 160
Glyphosate	95.7	94.7	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
 Run ID: A102475
 Included Lab Sample IDs: 2210438

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.9	102	P/P	90 - 110
Calcium	103	102	P/P	90 - 110
Iron	100	101	P/P	90 - 110
Magnesium	99.9	99.3	P/P	90 - 110
Potassium	93.0	93.8	P/P	90 - 110
Sodium	96.9	97.5	P/P	90 - 110
Zinc	105	105	P/P	90 - 110

Reference Method: EPA 8321B
 Run ID: A102481
 Included Lab Sample IDs: 2210437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	70.7	135	P/P	50 - 150
Acetaminophen	83.4	102	P/P	60 - 160
Acetamiprid	87.0	104	P/P	50 - 150
Afidopyropen	101	90.3	P/P	50 - 150
Bentazon	75.5	83.9	P/P	50 - 160
Benzovindiflupyr	101	130	P/P	50 - 150
Carbamazepine	101	105	P/P	60 - 150
Clothianidin	83.4	94.1	P/P	60 - 150
Dinotefuran	79.1	87.9	P/P	50 - 150
Diuron	86.5	96.7	P/P	60 - 160
Fenuron	91.1	103	P/P	60 - 150
Fluridone	101	106	P/P	60 - 160
Hydrocodone	93.4	98.8	P/P	60 - 150
Ibuprofen	103	108	P/P	50 - 160
Imazapyr	79.1	87.9	P/P	50 - 150
Imidacloprid	76.2	89.4	P/P	60 - 150
Linuron	94.5	92.4	P/P	60 - 150
Mandestrobin	104	118	P/P	50 - 150
MCPP	70.4	76.6	P/P	50 - 150
Naproxen	107	53.9	P/P	50 - 160
Primidone	94.5	99.1	P/P	60 - 150
Pyraclostrobin	84.0	91.8	P/P	60 - 150
Thiamethoxam	83.9	102	P/P	50 - 150
Tolfenpyrad	98.6	104	P/P	60 - 150
Triclopyr	79.3	94.1	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A102488

Included Lab Sample IDs: 2210432

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102490

Included Lab Sample IDs: 2210432

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	105	P/P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102503

Included Lab Sample IDs: 2210438

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	94.5	96.1	P/P	90 - 110
Arsenic	96.1	95.8	P/P	90 - 110
Beryllium	97.3	95.9	P/P	90 - 110
Boron	104	99.1	P/P	90 - 110
Cadmium	98.1	99.5	P/P	90 - 110
Chromium	95.1	94.4	P/P	90 - 110
Lead	106	106	P/P	90 - 110
Nickel	93.9	95.4	P/P	90 - 110
Selenium	97.3	96.3	P/P	90 - 110
Thallium	104	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102510

Included Lab Sample IDs: 2210437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	97.3	97.3	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102528

Included Lab Sample IDs: 2210438

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.4	97.1	P/P	90 - 110
Silver	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102553

Included Lab Sample IDs: 2210432

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.9	96.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A102581

Included Lab Sample IDs: 2210439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	98.1		P	80 - 120
Atrazine	98.5		P	80 - 120
Atrazine Desethyl	93.7		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Azoxystrobin	96.9		P	80 - 120
Bromacil	94.0		P	80 - 120
Butylate	97.4		P	80 - 120
Carbophenothion	104		P	80 - 120
Carfentrazone Ethyl	101		P	80 - 120
Chlorpyrifos Ethyl	104		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	100		P	80 - 120
Demeton	82.1		P	80 - 120
Diazinon	97.3		P	80 - 120
Difenoconazole	96.6		P	80 - 120
Dimethenamid	97.8		P	80 - 120
Disulfoton	100		P	80 - 120
Dithiopyr	98.0		P	80 - 120
EPTC	96.0		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	94.7		P	80 - 120
Fenbuconazole	97.7		P	80 - 120
Fipronil	94.9		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	94.6		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Fludioxonil	103		P	80 - 120
Flumioxazin	97.0		P	80 - 120
Flutolanil	106		P	80 - 120
Fluxapyroxad	96.5		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	103		P	80 - 120
Imazalil	105		P	80 - 120
Iprodione	104		P	80 - 120
Malathion	102		P	80 - 120
Metaxyl	97.7		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	97.2		P	80 - 120
Mevinphos	112		P	80 - 120
Molinate	94.2		P	80 - 120
Myclobutanil	95.4		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	92.0		P	80 - 120
Oxadiazon	99.1		P	80 - 120
Oxyfluorfen	102		P	80 - 120
Parathion Ethyl	93.3		P	80 - 120
Parathion Methyl	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A102581

Included Lab Sample IDs: 2210439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pendimethalin	97.7		P	80 - 120
Phorate	96.5		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	96.3		P	80 - 120
Prometryn	94.2		P	80 - 120
Pronamide	95.2		P	80 - 120
Propiconazole	102		P	80 - 120
Pyriproxyfen	96.1		P	80 - 120
Simazine	103		P	80 - 120
Sulfentrazone	95.2		P	80 - 120
Tebuconazole	103		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	96.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102601

Included Lab Sample IDs: 2210438

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	93.9	94.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102694

Included Lab Sample IDs: 2210432

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

* 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							6.80	
EPA 200.7 Rev. 4.4	Barium	101		104	105	107			0.639
	Calcium	105		106	109				2.70
	Iron	101		108	109	97.7			0.969
	Magnesium	102		108	108	107			0.289
	Potassium	95.6		98.4	97.0	98.7			1.33
	Sodium	97.3		98.4	97.5				0.0263
	Zinc	104		108	108	108			0.519
EPA 200.8 Rev. 5.4	Aluminum	97.5		96.6	97.5	97.5			0.962
	Antimony	102		97.1	99.3	98.2			2.27
	Arsenic	101		96.7	96.1	95.3			1.44
	Beryllium	93.8		90.7	93.2	91.5			2.67
	Boron	97.2		92.9	92.7	95.9			0.189
	Cadmium	101		96.2	97.0	98.5			0.852
	Chromium	96.0		90.5	92.1	92.7			1.72
	Copper	94.2		96.1	95.2	92.3			0.946
	Lead	106		98.5	102	105			3.00
	Nickel	109		95.0	96.2	96.1			1.33
	Selenium	103		93.6	94.5	82.0			0.932
	Silver	103		99.0	96.6	99.1			2.43
	Thallium	105		96.6	101	103			4.08
EPA 300.0 Rev. 2.1	Chloride	102		102	103			0.708	
	Sulfate	102		101	104			1.13	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6		95.8	96.0				0.122
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4		96.4	97.2				0.775
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101		96.2					0.169
EPA 365.1 Rev. 2.0	Total-P	105		106	107				1.03
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3		99.9	100				0.504
EPA 8270E	Acetochlor	104	105	110	100		0.722		9.44
	Alachlor	96.5	95.9	98.7	89.2		0.616		10.0
	Ametryn	108	103	97.7	96.8		4.00		0.833
	Atrazine	96.8	97.0	97.3	91.1		0.142		6.07
	Atrazine Desethyl	82.4	87.3	69.9	72.6		5.70		3.73
	Azinphos Methyl	134	130	122	115		3.42		5.58
	Azoxystrobin	148	138	143	132		6.76		7.54
	Bromacil	86.2	89.8	87.0	79.9		4.11		8.59
	Butylate	76.3	71.0	69.1	57.7		7.14		17.9
	Carbophenothion	97.2	94.7	93.3	91.0		2.57		2.56
	Carfentrazone Ethyl	111	116	112	104		3.75		7.61
	Chlorpyrifos Ethyl	99.8	93.4	97.8	93.7		6.60		4.25
	Chlorpyrifos Methyl	102	99.1	103	98.0		3.13		4.52
	Cyanazine	114	111	113	112		2.43		1.09
	Demeton	88.8	81.3	81.7	84.2		8.79		3.07
	Diazinon	104	102	107	103		2.64		3.75
	Difenoconazole	130	128	133	123		1.29		7.23
	Dimethenamid	94.3	88.4				6.43		6.18
	Disulfoton	95.0	97.9	97.4	96.9		3.01		0.574
	Dithiopyr	88.9	86.2	88.8	84.1		3.01		5.01
	EPTC	69.1	68.6	67.0	63.2		0.652		5.84
	Ethion	89.2	81.7	85.8	82.5		8.71		3.90
	Ethoprop	94.7	92.5	96.6	94.7		2.30		1.97
	Fenamiphos	93.9	87.3	87.4	87.0		7.27		0.440
	Fenbuconazole	106	103	107	101		2.59		5.22
	Fipronil	103	102	106	98.6		0.843		7.08

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Fipronil Desulfinyl	103	101	106	101	1.43	5.56
	Fipronil Sulfide	93.2	92.2	95.1	88.0	1.03	7.70
	Fipronil Sulfone	85.7	81.9	83.3	75.6	4.59	9.75
	Fluazifop-P-butyl	98.9	96.9	99.5	94.6	2.07	5.00
	Fludioxonil	106	104	105	91.7	2.14	13.4
	Flumioxazin	110	102	105	93.0	7.23	11.7
	Flutolanil	108	102	105	97.4	5.34	7.48
	Fluxapyroxad	92.1	90.8	93.8	83.1	1.43	9.42
	Fonofos	91.6	92.8	95.2	99.0	1.27	3.89
	Hexazinone	89.5	87.7	91.7	87.0	2.05	4.64
	Imazalil	100	106	107	102	5.72	4.42
	Iprodione	99.1	93.5	90.1	87.6	5.82	2.72
	Malathion	90.3	87.4	87.3	81.5	3.30	6.92
	Metalaxyl	98.1	95.8	101	92.9	2.39	8.22
	Metolachlor	99.0	97.9	102	93.7	1.13	8.20
	Metribuzin	102	106	108	103	3.67	4.07
	Mevinphos	103	104	101	98.0	0.413	2.78
	Molinate	79.6	77.9	76.7	72.7	2.18	5.35
	Myclobutanil	97.7	95.9	93.4	91.3	1.91	1.97
	Naled	55.7	56.3	54.7	51.9	1.19	5.29
	Norflurazon	95.4	87.9	87.9	84.2	8.18	3.52
	Oxadiazon	93.8	91.8	95.6	89.3	2.05	6.84
	Oxyfluorfen	109	103	115	109	5.48	5.39
	Parathion Ethyl	90.0	90.3	94.0	92.1	0.312	2.07
	Parathion Methyl	120	114	119	113	4.97	4.50
	Pendimethalin	92.1	88.6	96.5	95.1	3.87	1.41
	Phorate	104	119	108	99.2	14.0	8.44
	Prodiamine	28.6	78.7	70.3	48.9	93.5	35.9
	Prometon	85.6	90.4	94.9	89.3	5.44	6.06
	Prometryn	107	106	109	104	1.25	4.34
	Pronamide	104	101	106	98.2	2.21	7.59
	Propiconazole	106	105	109	98.5	0.631	8.53
	Pyriproxyfen	94.6	90.3	98.5	88.1	4.61	11.2
	Simazine	103	102	101	97.5	0.706	3.90
	Sulfentrazone	80.9	80.0	77.8	76.3	1.18	1.94
	Tebuconazole	64.5	55.2	56.6	47.2	15.6	18.1
	Terbufos	93.7	92.1	99.9	99.0	1.73	0.929
	Terbutylazine	93.1	93.7	97.1	92.9	0.662	4.42
EPA 8321B	2,4-D	73.4		84.2	84.9		0.779
	Acesulfame K	114		137	160		15.9
	Acetaminophen	68.6		57.2	62.7		9.28
	Acetamiprid	78.3		70.5	73.1		3.61
	Afidopyropen	60.4		54.4	57.1		4.84
	AMPA	75.6		89.8	91.0		1.26
	Bentazon	34.6		48.9	49.9		1.79
	Benzovindiflupyr	81.5		88.1	78.9		11.0
	Carbamazepine	59.5		57.1	57.5		0.726
	Clothianidin	78.6		56.0	56.4		0.821
	Dinotefuran	76.5		88.7	89.4		0.763
	Diuron	59.0		57.6	54.6		5.23
	Endothall	78.0		109	112		3.35
	Fenuron	85.6		78.7	82.7		4.91
	Fluridone	68.9		69.4	69.7		0.368
	Glufosinate	109		100	105		4.12

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Glyphosate	96.7	87.1	88.6		
	Hydrocodone	83.1	125	118		
	Ibuprofen	50.0	49.7	48.4		
	Imazapyr	67.2	67.4	58.2		
	Imidacloprid	80.2	100	89.0		
	Linuron	60.8	57.9	54.1		
	Mandestrobin	77.8	80.6	83.2		
	MCP	96.7	100	97.5		
	Naproxen	48.2	51.3	41.6		
	Primidone	74.3	57.2	55.4		
	Pyraclostrobin	55.4	56.4	58.4		
	Sucralose	99.1	96.3	102		
	Thiamethoxam	81.1	103	98.0		
	Tolfenpyrad	50.9	51.4	49.6		
	Triclopyr	77.4	93.6	72.5		
SM 2120 B-2011	Color (true)	102				1.95
SM 2320 B-2011	Total Alkalinity	101				0.715
SM 2540 C-2011	TDS					0.943
SM 4500 F-C-2011	Fluoride	97.8	98.7	98.7		
SM 5310 B-2011	Organic Carbon	98.8	96.9	97.2		

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2210431
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2210438
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2210438
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2210431
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2210431
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2210432
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2210432
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2210432
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2210432
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2210433
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2210439
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2210437
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2210437
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2210431
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2210431
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2210438
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2210431
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2210431
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2210431
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2210432

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	12/03/2020			12/03/2020 15:58	Yen Ta	2210431
EPA 200.7 Rev. 4.4	12/03/2020	12/07/2020 14:20	Elliott D. Healy	12/08/2020 16:56	Betina Topolski	2210438
EPA 200.8 Rev. 5.4	12/03/2020	12/07/2020 14:20	Elliott D. Healy	12/09/2020 18:06	Alexander Thompson	2210438
	12/03/2020	12/07/2020 14:20	Elliott D. Healy	12/10/2020 14:00	Alexander Thompson	2210438
	12/03/2020	12/14/2020 14:20	Elliott D. Healy	12/15/2020 21:59	Alexander Thompson	2210438
EPA 300.0 Rev. 2.1	12/03/2020			12/05/2020 00:49	Lipi Saha	2210431
EPA 350.1 Rev. 2.0	12/03/2020			12/13/2020 13:07	Ping Hua	2210432
EPA 351.2 Rev. 2.0	12/03/2020	12/18/2020 14:40	David Boose	12/20/2020 20:04	Julia Storbeck	2210432
EPA 353.2 Rev. 2.0	12/03/2020			12/08/2020 10:22	Beverly Y. Sanders	2210432
EPA 365.1 Rev. 2.0	12/03/2020	12/07/2020 14:14	Yen Ta	12/09/2020 13:17	Lipi Saha	2210432
EPA 365.1 Rev. 2.0 dissolved	12/03/2020			12/03/2020 15:23	Samantha Davila	2210433
EPA 8270E	12/03/2020	12/07/2020 08:00	Fe-Val Siddell	12/08/2020 17:30	Vandana T. Nagar	2210439
EPA 8321B	12/03/2020	12/04/2020 09:00	Hoor Shaik	12/09/2020 16:31	Juyoung Kim	2210437
	12/03/2020	12/07/2020 11:00	Rebecca Ware	12/07/2020 17:58	Rebecca Ware	2210437
	12/03/2020	12/07/2020 11:00	Rebecca Ware	12/09/2020 20:27	Rebecca Ware	2210437
SM 2120 B-2011	12/03/2020			12/03/2020 17:25	Benjamin T. Nordmann	2210431
SM 2320 B-2011	12/03/2020			12/04/2020 19:25	Dale L. Simmons	2210431
SM 2340B	12/03/2020			12/08/2020 16:56	Betina Topolski	2210438
SM 2540 C-2011	12/03/2020			12/04/2020 15:10	Yijie Li	2210431
SM 2540 D-2011	12/03/2020			12/04/2020 15:10	Yijie Li	2210431
SM 4500 F-C-2011	12/03/2020			12/04/2020 19:25	Dale L. Simmons	2210431
SM 5310 B-2011	12/03/2020			12/08/2020 22:24	David Boose	2210432