

Chemical Analysis Report

NE-DIST-2020-12-09-01

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

Event Description: **Little St.Marys, Alligator SCI**
Request ID: **RQ-2020-12-07-40**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

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

Date Certified: 04-JAN-2021 13:09

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 first name.

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: Alligator Cr At Hobbs Landing

Collection Date/Time: 12/08/2020 13:50

Field ID: G4NE0280

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211843	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P390934	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P391161	
		Sulfate	11		mg SO4/L	P391163	
	SM 2120 B-2011	Color (true)	250		PCU	P390947	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P391137	
	SM 2540 C-2011	TDS	194		mg/L	P391518	
	SM 2540 D-2011	TSS	2	I	mg/L	P391523	
	SM 4500 F-C-2011	Fluoride	0.078	I	mg F/L	P391030	
2211844	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P391130	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P391555	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P390963	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P391058	
	SM 5310 B-2011	Organic Carbon	27		mg C/L	P391061	
2211845	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.087		mg P/L	P390931	
2211875	EPA 8321B	2,4-D	0.0020	U	ug/L	P390959	
		Acesulfame K**	0.10	U	ug/L	P391013	
		AMPA**	0.10	U	ug/L	P391013	
		Sucralose**	0.77		ug/L	P391013	
		Acetaminophen**	0.0080	U	ug/L	P390959	
		Acetamiprid**	0.0020	U	ug/L	P390959	
		Endothall**	0.25	U	ug/L	P391013	
		Glufosinate**	0.10	U	ug/L	P391013	
		Glyphosate**	0.10	U	ug/L	P391013	
		Afidopyropen**	0.0020	U	ug/L	P390959	
		Bentazon	0.0068		ug/L	P390959	
		Benzovindiflupyr**	0.0020	U	ug/L	P390959	
		Carbamazepine**	8.0E-04	U	ug/L	P390959	
		Clothianidin**	0.0020	U	ug/L	P390959	
		Dinotefuran**	0.0020	U	ug/L	P390959	
		Diuron	0.0020	U	ug/L	P390959	
		Fenuron	0.016	U	ug/L	P390959	
		Fluridone**	8.0E-04	U	ug/L	P390959	
		Imazapyr**	0.045		ug/L	P390959	
		Hydrocodone**	0.0020	U	ug/L	P390959	
		Ibuprofen**	0.020	U	ug/L	P390959	
		Imidacloprid	0.0020	U	ug/L	P390959	
		Linuron	0.0040	U	ug/L	P390959	
		Mandestrobin**	0.0020	U	ug/L	P390959	
		MCP	0.0020	U	ug/L	P390959	
		Naproxen**	0.0080	U	ug/L	P390959	RPD
		Primidone**	0.0040	U	ug/L	P390959	
		Pyraclostrobin**	0.0020	U	ug/L	P390959	
		Thiamethoxam**	0.0020	U	ug/L	P390959	

Field ID: G4NE0280

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211875	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P390959	
		Triclopyr**	0.0040	U	ug/L	P390959	
2211876	EPA 200.7 Rev. 4.4	Barium	21.0		ug/L	P390978	
		Calcium	16.5		mg/L	P390978	
		Iron	560		ug/L	P390978	
		Magnesium	7.39		mg/L	P390978	
		Potassium	3.9		mg/L	P390978	
		Sodium	25.2		mg/L	P390978	
		Zinc	5.0	U	ug/L	P390978	
	EPA 200.8 Rev. 5.4	Aluminum	194		ug/L	P390978	
		Antimony	0.054	I	ug/L	P390978	
		Arsenic	0.52		ug/L	P390978	
		Beryllium	0.028	I	ug/L	P390978	
		Boron**	31.9		ug/L	P390978	
		Cadmium	0.020	U	ug/L	P390978	
		Chromium	0.57	I	ug/L	P390978	
		Copper	0.40	U	ug/L	P390978	
		Lead	0.37	I	ug/L	P390978	
		Nickel	0.50	U	ug/L	P390978	
		Selenium	0.20	U	ug/L	P390978	
		Silver	0.010	U	ug/L	P390978	
		Thallium	0.10	U	ug/L	P390978	
	SM 2340B	Hardness	71.5		mg/L	P390978	
2211877	EPA 8270E	Acetochlor	0.25	U	ng/L	P390895	
		Alachlor	0.25	U	ng/L	P390895	
		Ametryn	0.60	UJ	ng/L	P390895	LCS
		Atrazine	2.0		ng/L	P390895	
		Atrazine Desethyl	1.5	U	ng/L	P390895	
		Azinphos Methyl	2.0	UJ	ng/L	P390895	LCS
		Azoxystrobin**	0.50	U	ng/L	P390895	
		Bromacil	0.50	U	ng/L	P390895	
		Butylate	0.40	U	ng/L	P390895	
		Carbophenothion	0.50	U	ng/L	P390895	
		Carfentrazone Ethyl**	0.10	U	ng/L	P390895	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P390895	
		Chlorpyrifos Methyl	0.050	U	ng/L	P390895	
		Cyanazine	3.3	U	ng/L	P390895	
		Demeton	1.5	U	ng/L	P390895	
		Diazinon	0.13	U	ng/L	P390895	
		Difenoconazole**	0.60	U	ng/L	P390895	MS
		Dimethenamid**	0.10	U	ng/L	P390895	
		Disulfoton	0.50	U	ng/L	P390895	
		Dithiopyr**	0.10	U	ng/L	P390895	MS
		EPTC	1.3	U	ng/L	P390895	
		Ethion	0.15	U	ng/L	P390895	

Field ID: G4NE0280

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211877	EPA 8270E	Ethoprop	0.10	U	ng/L	P390895	
		Fenamiphos	0.50	U	ng/L	P390895	
		Fenbuconazole**	0.13	U	ng/L	P390895	
		Fipronil	0.25	U	ng/L	P390895	
		Fipronil Desulfinyl**	0.13	U	ng/L	P390895	
		Fipronil Sulfide	0.15	U	ng/L	P390895	
		Fipronil Sulfone	0.15	U	ng/L	P390895	
		Fluazifop-P-butyl**	0.10	U	ng/L	P390895	
		Fludioxonil**	0.13	U	ng/L	P390895	
		Flumioxazin**	1.8	U	ng/L	P390895	
		Flutolanil**	0.10	U	ng/L	P390895	
		Fluxapyroxad**	0.10	U	ng/L	P390895	
		Fonofos	0.20	U	ng/L	P390895	
		Hexazinone	0.62	I	ng/L	P390895	
		Imazalil**	0.76	U	ng/L	P390895	
		Iprodione**	0.60	U	ng/L	P390895	MS, RPD
		Malathion	0.35	U	ng/L	P390895	
		Metalaxyl	0.76	U	ng/L	P390895	
		Metolachlor	0.50	U	ng/L	P390895	
		Metribuzin	3.3	U	ng/L	P390895	
		Mevinphos	0.50	U	ng/L	P390895	
		Molinate	0.30	U	ng/L	P390895	
		Myclobutanil**	0.25	U	ng/L	P390895	
		Naled**	1.5	U	ng/L	P390895	
		Norflurazon	0.50	U	ng/L	P390895	
		Oxadiazon	0.10	U	ng/L	P390895	MS
		Oxyfluorfen**	0.15	U	ng/L	P390895	MS
		Parathion Ethyl	0.25	U	ng/L	P390895	
		Parathion Methyl	0.55	U	ng/L	P390895	
		Pendimethalin	1.0	U	ng/L	P390895	
		Phorate	0.25	U	ng/L	P390895	
		Prodiamine**	0.18	U	ng/L	P390895	RPD
		Prometon	0.91	U	ng/L	P390895	
		Prometryn	0.20	U	ng/L	P390895	
		Pronamide**	0.15	U	ng/L	P390895	
		Propiconazole**	0.50	U	ng/L	P390895	
		Pyriproxyfen**	0.13	U	ng/L	P390895	
		Simazine	2.6		ng/L	P390895	
		Sulfentrazone**	0.72	I	ng/L	P390895	
		Tebuconazole**	0.50	U	ng/L	P390895	
		Terbufos	0.10	U	ng/L	P390895	
		Terbuthylazine	0.43	U	ng/L	P390895	

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390934

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390978

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: P390978

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
Copper	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 300.0 Rev. 2.1
Batch ID: P391161

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391163

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391130

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390963

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391058

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390931

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

Reference Method: EPA 8270E
Batch ID: P390895

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P390895

Component	Result	Code	Units
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
Metaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B
Batch ID: P390959

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P390959

Component	Result	Code	Units
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: P391013

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: P390947

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P391137

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

Reference Method: SM 2540 C-2011
Batch ID: P391518

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P391523

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P391030

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P391061

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: P390978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	93.0		P	85 - 115
Calcium	93.4		P	85 - 115
Iron	95.0		P	85 - 115
Magnesium	91.7		P	85 - 115
Potassium	90.8		P	85 - 115
Sodium	91.7		P	85 - 115
Zinc	91.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	97.6		P	85 - 115
Beryllium	102		P	85 - 115
Boron	95.6		P	85 - 115
Cadmium	94.2		P	85 - 115
Chromium	100		P	85 - 115
Copper	93.1		P	85 - 115
Lead	99.7		P	85 - 115
Nickel	92.6		P	85 - 115
Selenium	95.5		P	85 - 115
Silver	107		P	85 - 115
Thallium	98.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391163

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391130

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390963

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391058

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: P390931

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

Reference Method: EPA 8270E
Batch ID: P390895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	100	90.6	P/P	71 - 122
Alachlor	103	93.8	P/P	70 - 121
Ametryn	147	152	F/F	49 - 137
Atrazine	104	98.8	P/P	76 - 125
Atrazine Desethyl	106	97.7	P/P	31 - 144
Azinphos Methyl	178	174	F/F	67 - 150
Azoxystrobin	121	113	P/P	70 - 170
Bromacil	101	90.2	P/P	36 - 121
Butylate	60.2	57.5	P/P	33 - 88.0
Carbophenothion	99.9	93.0	P/P	66 - 116
Carfentrazone Ethyl	122	111	P/P	50 - 150
Chlorpyrifos Ethyl	92.0	84.2	P/P	73 - 117
Chlorpyrifos Methyl	102	95.3	P/P	68 - 121
Cyanazine	131	122	P/P	20 - 250
Demeton	89.5	90.5	P/P	30 - 123
Diazinon	112	101	P/P	70 - 128
Difenoconazole	141	129	P/P	50 - 150
Dimethenamid	93.4	87.0	P/P	66 - 122
Disulfoton	95.0	94.6	P/P	46 - 124
Dithiopyr	100	86.6	P/P	69 - 122
EPTC	59.0	62.0	P/P	31 - 90.0
Ethion	81.6	82.9	P/P	45 - 135
Ethoprop	93.5	88.7	P/P	59 - 118
Fenamiphos	97.9	88.9	P/P	30 - 136
Fenbuconazole	118	106	P/P	50 - 150
Fipronil	119	109	P/P	57 - 127
Fipronil Desulfinyl	109	95.2	P/P	51 - 122
Fipronil Sulfide	107	96.0	P/P	57 - 119
Fipronil Sulfone	85.7	78.1	P/P	51 - 119
Fluazifop-P-butyl	111	94.5	P/P	50 - 150
Fludioxonil	100	98.3	P/P	50 - 150
Flumioxazin	124	120	P/P	20 - 250
Flutolanil	111	98.4	P/P	50 - 150
Fluxapyroxad	101	94.1	P/P	50 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P390895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fonofos	95.7	90.9	P/P	60 - 120
Hexazinone	94.2	87.5	P/P	57 - 142
Imazalil	117	101	P/P	30 - 139
Iprodione	106	94.9	P/P	50 - 150
Malathion	88.2	81.8	P/P	67 - 128
Metalaxyl	111	98.7	P/P	21 - 148
Metolachlor	97.1	86.4	P/P	70 - 120
Metribuzin	138	122	P/P	20 - 250
Mevinphos	93.0	87.7	P/P	47 - 116
Molinate	78.8	76.1	P/P	41 - 99.0
Myclobutanil	110	99.6	P/P	50 - 150
Naled	45.5	47.4	P/P	38 - 97.0
Norflurazon	110	101	P/P	54 - 127
Oxadiazon	101	89.8	P/P	65 - 122
Oxyfluorfen	124	118	P/P	50 - 150
Parathion Ethyl	100	96.7	P/P	71 - 113
Parathion Methyl	123	112	P/P	73 - 129
Pendimethalin	86.3	79.2	P/P	63 - 130
Phorate	114	113	P/P	48 - 118
Prodiamine	113	101	P/P	20 - 144
Prometon	100	93.5	P/P	53 - 120
Prometryn	119	107	P/P	63 - 119
Pronamide	109	102	P/P	81 - 122
Propiconazole	110	103	P/P	62 - 124
Pyriproxyfen	104	94.5	P/P	50 - 150
Simazine	103	99.4	P/P	77 - 129
Sulfentrazone	95.5	92.2	P/P	20 - 137
Tebuconazole	54.7	51.4	P/P	20 - 118
Terbufos	92.9	87.4	P/P	61 - 119
Terbutylazine	99.7	90.5	P/P	75 - 119

Reference Method: EPA 8321B
Batch ID: P390959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	100		P	30 - 160
Acetaminophen	77.3		P	30 - 150
Acetamiprid	113		P	30 - 160
Afidopyropen	69.2		P	30 - 160
Bentazon	51.7		P	30 - 150
Benzovindiflupyr	94.3		P	30 - 160
Carbamazepine	76.6		P	30 - 160
Clothianidin	90.9		P	30 - 160
Dinotefuran	92.8		P	30 - 160
Diuron	50.5		P	30 - 160
Fenuron	107		P	30 - 160
Fluridone	91.4		P	30 - 160
Hydrocodone	95.5		P	30 - 160
Ibuprofen	53.3		P	30 - 160
Imazapyr	73.4		P	30 - 160
Imidacloprid	121		P	30 - 160
Linuron	60.7		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P390959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mandestrobin	91.3		P	30 - 160
MCP	109		P	30 - 160
Naproxen	43.7		P	30 - 160
Primidone	79.7		P	30 - 160
Pyraclostrobin	74.9		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	60.4		P	30 - 160
Triclopyr	110		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P391013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
AMPA	90.8		P	40 - 150
Endothall	94.9		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	80.5		P	40 - 140
Sucralose	103		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P390947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P391137

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P391030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P391061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211689	Barium	100		P	80 - 120
2211689	Calcium	102		P	80 - 120
2211689	Iron	106		P	80 - 120
2211689	Magnesium	104		P	80 - 120
2211689	Potassium	106		P	80 - 120
2211689	Sodium	106		P	80 - 120
2211689	Zinc	98.2		P	80 - 120
2211748	Barium	97.6	97.7	P/P	80 - 120
2211748	Calcium	98.9		P	80 - 120
2211748	Iron	101	101	P/P	80 - 120
2211748	Magnesium	96.9		P	80 - 120
2211748	Potassium	95.0	95.8	P/P	80 - 120
2211748	Sodium	98.6		P	80 - 120
2211748	Zinc	93.3	92.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211689	Aluminum	99.2		P	80 - 120
2211689	Antimony	106		P	80 - 120
2211689	Arsenic	98.3		P	80 - 120
2211689	Beryllium	103		P	80 - 120
2211689	Boron	95.3		P	80 - 120
2211689	Cadmium	98.1		P	80 - 120
2211689	Chromium	101		P	80 - 120
2211689	Copper	91.3		P	80 - 120
2211689	Lead	103		P	80 - 120
2211689	Nickel	92.8		P	80 - 120
2211689	Selenium	93.3		P	80 - 120
2211689	Silver	107		P	80 - 120
2211689	Thallium	102		P	80 - 120
2211748	Aluminum	102	101	P/P	80 - 120
2211748	Antimony	105	105	P/P	80 - 120
2211748	Arsenic	97.8	97.5	P/P	80 - 120
2211748	Beryllium	103	103	P/P	80 - 120
2211748	Boron	95.9	97.9	P/P	80 - 120
2211748	Cadmium	95.6	95.6	P/P	80 - 120
2211748	Chromium	100	101	P/P	80 - 120
2211748	Copper	93.2	93.4	P/P	80 - 120
2211748	Lead	102	102	P/P	80 - 120
2211748	Nickel	93.4	93.3	P/P	80 - 120
2211748	Selenium	95.2	93.5	P/P	80 - 120
2211748	Silver	108	108	P/P	80 - 120
2211748	Thallium	102	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391161

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211733	Chloride	96.9		P	90 - 110
2212033	Chloride	95.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211733	Sulfate	96.2		P	90 - 110
2212033	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211308	Ammonia-N	99.8	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211964	Kjeldahl Nitrogen	101	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211777	NO2NO3-N	98.6	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211737	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211955	O-Phosphate-P	102	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P390895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211384	Acetochlor	88.3	89.1	P/P	68 - 126
2211384	Alachlor	71.6	67.8	P/P	66 - 125
2211384	Ametryn	132	110	P/P	31 - 182
2211384	Atrazine Desethyl	99.3	107	P/P	13 - 161
2211384	Azinphos Methyl	136	128	P/P	54 - 162
2211384	Azoxystrobin	138	96.4	P/P	70 - 170
2211384	Bromacil	98.9	77.6	P/P	34 - 144
2211384	Butylate	64.0	73.0	P/P	16 - 92.0
2211384	Carbophenothion	96.5	86.4	P/P	30 - 131
2211384	Carfentrazone Ethyl	115	110	P/P	50 - 150
2211384	Chlorpyrifos Ethyl	103	98.0	P/P	63 - 124
2211384	Chlorpyrifos Methyl	85.6	77.9	P/P	64 - 125
2211384	Cyanazine	95.4	93.5	P/P	13 - 245
2211384	Demeton	117	123	P/P	20 - 154
2211384	Diazinon	95.1	99.0	P/P	66 - 141

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P390895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211384	Difenoconazole	169	137	F/P	50 - 150
2211384	Dimethenamid	91.0	86.6	P/P	50 - 130
2211384	Disulfoton	99.1	102	P/P	55 - 130
2211384	Dithiopyr	61.8	58.3	F/F	66 - 122
2211384	EPTC	61.2	51.0	P/P	15 - 93.0
2211384	Ethion	78.3	74.8	P/P	15 - 148
2211384	Ethoprop	103	91.8	P/P	59 - 126
2211384	Fenamiphos	109	104	P/P	39 - 137
2211384	Fenbuconazole	130	115	P/P	50 - 150
2211384	Fluazifop-P-butyl	107	100	P/P	50 - 150
2211384	Fludioxonil	112	101	P/P	50 - 150
2211384	Flumioxazin	189	153	P/P	10 - 300
2211384	Flutolanil	116	91.1	P/P	50 - 150
2211384	Fonofos	90.1	84.4	P/P	62 - 128
2211384	Hexazinone	99.2	92.7	P/P	58 - 154
2211384	Imazalil	123	111	P/P	10 - 215
2211384	Iprodione	35.6	63.6	F/P	50 - 150
2211384	Malathion	71.4	67.9	P/P	54 - 135
2211384	Metalaxyl	108	102	P/P	46 - 136
2211384	Metolachlor	85.6	83.0	P/P	62 - 126
2211384	Metribuzin	133	123	P/P	44 - 277
2211384	Mevinphos	97.8	85.3	P/P	44 - 135
2211384	Molinate	84.3	74.4	P/P	31 - 104
2211384	Myclobutanil	122	104	P/P	50 - 150
2211384	Naled	34.4	36.3	P/P	33 - 113
2211384	Norflurazon	120	103	P/P	32 - 134
2211384	Oxadiazon	53.9	52.9	F/F	55 - 123
2211384	Oxyfluorfen	170	155	F/F	50 - 150
2211384	Parathion Ethyl	104	103	P/P	67 - 120
2211384	Parathion Methyl	129	119	P/P	70 - 140
2211384	Pendimethalin	111	107	P/P	59 - 145
2211384	Phorate	87.8	87.4	P/P	52 - 127
2211384	Prodiamine	124	56.7	P/P	11 - 157
2211384	Prometon	103	87.2	P/P	55 - 130
2211384	Prometryn	117	108	P/P	55 - 127
2211384	Pronamide	104	116	P/P	66 - 150
2211384	Propiconazole	116	93.2	P/P	14 - 178
2211384	Pyriproxyfen	114	103	P/P	50 - 150
2211384	Sulfentrazone	101	95.4	P/P	21 - 144
2211384	Terbufos	110	109	P/P	65 - 131
2211384	Terbuthylazine	104	99.2	P/P	63 - 131

Reference Method: EPA 8321B
Batch ID: P390959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211291	2,4-D	72.9	75.6	P/P	30 - 160
2211291	Acetaminophen	56.8	59.6	P/P	30 - 150
2211291	Acetamiprid	99.2	78.6	P/P	30 - 160
2211291	Afidopyropen	58.1	45.7	P/P	30 - 160
2211291	Bentazon	57.6	58.4	P/P	30 - 150
2211291	Benzovindiflupyr	74.8	73.7	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P390959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211291	Carbamazepine	55.3	55.6	P/P	30 - 160
2211291	Clothianidin	72.8	77.0	P/P	30 - 160
2211291	Dinotefuran	95.1	89.5	P/P	30 - 160
2211291	Diuron	44.4	39.1	P/P	30 - 160
2211291	Fenuron	77.1	76.8	P/P	30 - 160
2211291	Fluridone	66.2	70.9	P/P	30 - 160
2211291	Hydrocodone	94.7	95.0	P/P	30 - 160
2211291	Ibuprofen	36.0	41.6	P/P	30 - 160
2211291	Imazapyr	70.6	64.9	P/P	30 - 160
2211291	Imidacloprid	129	122	P/P	30 - 160
2211291	Linuron	53.2	50.5	P/P	30 - 160
2211291	Mandestrobin	75.5	66.6	P/P	30 - 160
2211291	MCP	77.8	71.0	P/P	30 - 160
2211291	Naproxen	37.3	53.1	P/P	30 - 160
2211291	Primidone	70.3	68.8	P/P	30 - 160
2211291	Pyraclostrobin	74.4	69.4	P/P	30 - 160
2211291	Thiamethoxam	118	120	P/P	30 - 160
2211291	Tolfenpyrad	50.8	51.5	P/P	30 - 160
2211291	Triclopyr	88.2	77.3	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P391013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211875	Acesulfame K	92.0	91.9	P/P	40 - 150
2211875	AMPA	127	123	P/P	40 - 150
2211875	Endothall	114	110	P/P	40 - 150
2211875	Glufosinate	95.4	108	P/P	40 - 150
2211875	Glyphosate	80.9	97.1	P/P	40 - 140
2211875	Sucralose	99.9	103	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P391030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211963	Fluoride	98.4	96.4	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P391061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211954	Organic Carbon	99.5	99.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211776	Turbidity	3.21	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211748	Barium	0.0413	Spike	P	0 - 20
2211748	Calcium	0.315	Spike	P	0 - 20
2211748	Iron	0.123	Spike	P	0 - 20
2211748	Magnesium	0.406	Spike	P	0 - 20
2211748	Potassium	0.616	Spike	P	0 - 20
2211748	Sodium	1.51	Spike	P	0 - 20
2211748	Zinc	0.682	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211748	Aluminum	1.02	Spike	P	0 - 20
2211748	Antimony	0.161	Spike	P	0 - 20
2211748	Arsenic	0.333	Spike	P	0 - 20
2211748	Beryllium	0.386	Spike	P	0 - 20
2211748	Boron	1.69	Spike	P	0 - 20
2211748	Cadmium	0.00906	Spike	P	0 - 20
2211748	Chromium	0.837	Spike	P	0 - 20
2211748	Copper	0.263	Spike	P	0 - 20
2211748	Lead	0.105	Spike	P	0 - 20
2211748	Nickel	0.136	Spike	P	0 - 20
2211748	Selenium	1.84	Spike	P	0 - 20
2211748	Silver	0.111	Spike	P	0 - 20
2211748	Thallium	0.288	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211733	Chloride	0.195	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211733	Sulfate	0.179	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P391130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211308	Ammonia-N	0.145	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P391555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211964	Kjeldahl Nitrogen	4.34	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P390963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211777	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P391058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211737	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P390931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211955	O-Phosphate-P	1.17	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P390895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211384	Acetochlor	0.944	Spike	P	0 - 30
2211384	Alachlor	5.47	Spike	P	0 - 30
2211384	Ametryn	17.6	Spike	P	0 - 30
2211384	Atrazine	2.51	Spike	P	0 - 30
2211384	Atrazine Desethyl	7.48	Spike	P	0 - 30
2211384	Azinphos Methyl	6.67	Spike	P	0 - 30
2211384	Azoxystrobin	29.7	Spike	P	0 - 30
2211384	Bromacil	14.3	Spike	P	0 - 30
2211384	Butylate	13.0	Spike	P	0 - 30
2211384	Carbophenothion	11.1	Spike	P	0 - 30
2211384	Carfentrazone Ethyl	4.18	Spike	P	0 - 30
2211384	Chlorpyrifos Ethyl	5.00	Spike	P	0 - 30
2211384	Chlorpyrifos Methyl	9.37	Spike	P	0 - 30
2211384	Cyanazine	1.97	Spike	P	0 - 30
2211384	Demeton	5.45	Spike	P	0 - 30
2211384	Diazinon	4.01	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211384	Difenoconazole	21.0	Spike	P	0 - 30
2211384	Dimethenamid	5.03	Spike	P	0 - 30
2211384	Disulfoton	3.30	Spike	P	0 - 30
2211384	Dithiopyr	5.55	Spike	P	0 - 30
2211384	EPTC	18.1	Spike	P	0 - 30
2211384	Ethion	4.56	Spike	P	0 - 30
2211384	Ethoprop	11.2	Spike	P	0 - 30
2211384	Fenamiphos	4.94	Spike	P	0 - 30
2211384	Fenbuconazole	12.2	Spike	P	0 - 30
2211384	Fipronil	5.97	Spike	P	0 - 30
2211384	Fipronil Desulfinyl	2.68	Spike	P	0 - 30
2211384	Fipronil Sulfide	18.1	Spike	P	0 - 30
2211384	Fipronil Sulfone	12.1	Spike	P	0 - 30
2211384	Fluazifop-P-butyl	6.94	Spike	P	0 - 30
2211384	Fludioxonil	10.9	Spike	P	0 - 30
2211384	Flumioxazin	21.5	Spike	P	0 - 30
2211384	Flutolanil	24.0	Spike	P	0 - 30
2211384	Fluxapyroxad	9.69	Spike	P	0 - 30
2211384	Fonofos	6.54	Spike	P	0 - 30
2211384	Hexazinone	6.49	Spike	P	0 - 30
2211384	Imazalil	10.4	Spike	P	0 - 30
2211384	Iprodione	56.5	Spike	F	0 - 30
2211384	Malathion	5.08	Spike	P	0 - 30
2211384	Metalaxyl	5.56	Spike	P	0 - 30
2211384	Metolachlor	3.14	Spike	P	0 - 30
2211384	Metribuzin	7.58	Spike	P	0 - 30
2211384	Mevinphos	13.7	Spike	P	0 - 30
2211384	Molinate	12.5	Spike	P	0 - 30
2211384	Myclobutanil	15.8	Spike	P	0 - 30
2211384	Naled	5.26	Spike	P	0 - 30
2211384	Norflurazon	15.7	Spike	P	0 - 30
2211384	Oxadiazon	1.89	Spike	P	0 - 30
2211384	Oxyfluorfen	8.94	Spike	P	0 - 30
2211384	Parathion Ethyl	1.06	Spike	P	0 - 30
2211384	Parathion Methyl	8.42	Spike	P	0 - 30
2211384	Pendimethalin	3.49	Spike	P	0 - 30
2211384	Phorate	0.538	Spike	P	0 - 30
2211384	Prodiamine	74.3	Spike	F	0 - 30
2211384	Prometon	13.4	Spike	P	0 - 30
2211384	Prometryn	8.79	Spike	P	0 - 30
2211384	Pronamide	11.0	Spike	P	0 - 30
2211384	Propiconazole	14.8	Spike	P	0 - 30
2211384	Pyriproxyfen	10.4	Spike	P	0 - 30
2211384	Simazine	12.4	Spike	P	0 - 30
2211384	Sulfentrazone	4.66	Spike	P	0 - 30
2211384	Tebuconazole	9.58	Spike	P	0 - 30
2211384	Terbufos	1.15	Spike	P	0 - 30
2211384	Terbuthylazine	4.71	Spike	P	0 - 30
LFB	Acetochlor	10.2	LCS	P	0 - 30
LFB	Alachlor	9.82	LCS	P	0 - 30
LFB	Ametryn	3.52	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Atrazine	4.76	LCS	P	0 - 30
LFB	Atrazine Desethyl	8.10	LCS	P	0 - 30
LFB	Azinphos Methyl	2.50	LCS	P	0 - 30
LFB	Azoxystrobin	6.30	LCS	P	0 - 30
LFB	Bromacil	11.1	LCS	P	0 - 30
LFB	Butylate	4.60	LCS	P	0 - 30
LFB	Carbophenothion	7.18	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	9.22	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.81	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	7.02	LCS	P	0 - 30
LFB	Cyanazine	6.69	LCS	P	0 - 30
LFB	Demeton	1.08	LCS	P	0 - 30
LFB	Diazinon	10.3	LCS	P	0 - 30
LFB	Difenoconazole	8.94	LCS	P	0 - 30
LFB	Dimethenamid	7.16	LCS	P	0 - 30
LFB	Disulfoton	0.522	LCS	P	0 - 30
LFB	Dithiopyr	14.6	LCS	P	0 - 30
LFB	EPTC	4.87	LCS	P	0 - 30
LFB	Ethion	1.64	LCS	P	0 - 30
LFB	Ethoprop	5.25	LCS	P	0 - 30
LFB	Fenamiphos	9.60	LCS	P	0 - 30
LFB	Fenbuconazole	10.2	LCS	P	0 - 30
LFB	Fipronil	9.43	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	13.4	LCS	P	0 - 30
LFB	Fipronil Sulfide	10.4	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.36	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	15.8	LCS	P	0 - 30
LFB	Fludioxonil	1.96	LCS	P	0 - 30
LFB	Flumioxazin	3.73	LCS	P	0 - 30
LFB	Flutolanil	11.7	LCS	P	0 - 30
LFB	Fluxapyroxad	6.64	LCS	P	0 - 30
LFB	Fonofos	5.18	LCS	P	0 - 30
LFB	Hexazinone	7.38	LCS	P	0 - 30
LFB	Imazalil	14.5	LCS	P	0 - 30
LFB	Iprodione	10.8	LCS	P	0 - 30
LFB	Malathion	7.53	LCS	P	0 - 30
LFB	Metaxyl	11.6	LCS	P	0 - 30
LFB	Metolachlor	11.7	LCS	P	0 - 30
LFB	Metribuzin	12.4	LCS	P	0 - 30
LFB	Mevinphos	5.91	LCS	P	0 - 30
LFB	Molinate	3.45	LCS	P	0 - 30
LFB	Myclobutanil	10.1	LCS	P	0 - 30
LFB	Naled	4.17	LCS	P	0 - 30
LFB	Norflurazon	8.43	LCS	P	0 - 30
LFB	Oxadiazon	11.3	LCS	P	0 - 30
LFB	Oxyfluorfen	5.25	LCS	P	0 - 30
LFB	Parathion Ethyl	3.70	LCS	P	0 - 30
LFB	Parathion Methyl	9.73	LCS	P	0 - 30
LFB	Pendimethalin	8.58	LCS	P	0 - 30
LFB	Phorate	1.34	LCS	P	0 - 30
LFB	Prodiamine	11.6	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometon	6.92	LCS	P	0 - 30
LFB	Prometryn	10.2	LCS	P	0 - 30
LFB	Pronamide	6.06	LCS	P	0 - 30
LFB	Propiconazole	6.98	LCS	P	0 - 30
LFB	Pyriproxyfen	9.09	LCS	P	0 - 30
LFB	Simazine	4.01	LCS	P	0 - 30
LFB	Sulfentrazone	3.57	LCS	P	0 - 30
LFB	Tebuconazole	6.29	LCS	P	0 - 30
LFB	Terbufos	6.11	LCS	P	0 - 30
LFB	Terbuthylazine	9.66	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P390959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211291	2,4-D	3.63	Spike	P	0 - 30
2211291	Acetaminophen	4.83	Spike	P	0 - 30
2211291	Acetamiprid	23.2	Spike	P	0 - 30
2211291	Afidopyropen	23.9	Spike	P	0 - 30
2211291	Bentazon	1.47	Spike	P	0 - 30
2211291	Benzovindiflupyr	1.47	Spike	P	0 - 30
2211291	Carbamazepine	0.653	Spike	P	0 - 30
2211291	Clothianidin	5.56	Spike	P	0 - 30
2211291	Dinotefuran	6.03	Spike	P	0 - 30
2211291	Diuron	12.8	Spike	P	0 - 30
2211291	Fenuron	0.365	Spike	P	0 - 30
2211291	Fluridone	6.91	Spike	P	0 - 30
2211291	Hydrocodone	0.315	Spike	P	0 - 30
2211291	Ibuprofen	14.5	Spike	P	0 - 30
2211291	Imazapyr	8.42	Spike	P	0 - 30
2211291	Imidacloprid	6.11	Spike	P	0 - 30
2211291	Linuron	5.32	Spike	P	0 - 30
2211291	Mandestrobin	12.5	Spike	P	0 - 30
2211291	MCP	9.22	Spike	P	0 - 30
2211291	Naproxen	35.0	Spike	F	0 - 30
2211291	Primidone	2.12	Spike	P	0 - 30
2211291	Pyraclostrobin	6.97	Spike	P	0 - 30
2211291	Thiamethoxam	1.90	Spike	P	0 - 30
2211291	Tolfenpyrad	1.24	Spike	P	0 - 30
2211291	Triclopyr	13.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P391013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211875	Acesulfame K	0.137	Spike	P	0 - 30
2211875	AMPA	3.00	Spike	P	0 - 30
2211875	Endothall	4.07	Spike	P	0 - 30
2211875	Glufosinate	12.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P391013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211875	Glyphosate	18.2	Spike	P	0 - 30
2211875	Sucralose	2.10	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P390947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211953	Color (true)	0.424	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P391137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212395	Total Alkalinity	1.88	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P391518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211720	TDS	2.34	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P391030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211963	Fluoride	1.43	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P391061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211954	Organic Carbon	0.0	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2211875
Field Sample ID: G4NE0280

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	53.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	45.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	40.7	P	30 - 160
EPA 8321B	Diuron-d6	32.7	P	30 - 160
EPA 8321B	Endothall-d6	111	P	40 - 160
EPA 8321B	Endothall-d6	111	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	40 - 160
EPA 8321B	Ibuprofen-d3	40.9	P	30 - 160
EPA 8321B	Primidone-d5	50.1	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Lab Sample ID: 2211877
Field Sample ID: G4NE0280

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	110	P	72 - 135
EPA 8270E	Terbufos-d10	90.4	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102455

Included Lab Sample IDs: 2211843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.1	P/P	90 - 110
Sulfate	98.9	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102499

Included Lab Sample IDs: 2211845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102500

Included Lab Sample IDs: 2211843

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

Reference Method: SM 2120 B-2011

Run ID: A102508

Included Lab Sample IDs: 2211843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102515

Included Lab Sample IDs: 2211844

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

Reference Method: SM 4500 F-C-2011

Run ID: A102541

Included Lab Sample IDs: 2211843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A102548

Included Lab Sample IDs: 2211844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102556

Included Lab Sample IDs: 2211876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.2	97.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102556

Included Lab Sample IDs: 2211876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.5	96.2	P/P	90 - 110
Iron	97.7	97.2	P/P	90 - 110
Magnesium	95.9	95.2	P/P	90 - 110
Potassium	94.3	94.8	P/P	90 - 110
Sodium	96.3	95.8	P/P	90 - 110
Zinc	98.2	95.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102568

Included Lab Sample IDs: 2211875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	99.3	P/P	60 - 160
AMPA	113	92.2	P/P	60 - 160
Endothall	91.1	90.5	P/P	60 - 160
Glufosinate	83.1	75.6	P/P	60 - 160
Glyphosate	99.3	99.0	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102578

Included Lab Sample IDs: 2211844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.7	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A102580

Included Lab Sample IDs: 2211843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A102583

Included Lab Sample IDs: 2211877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	106		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	100		P	80 - 120
Azinphos Methyl	103		P	80 - 120
Azoxystrobin	102		P	80 - 120
Bromacil	98.9		P	80 - 120
Butylate	91.5		P	80 - 120
Carbophenothion	90.5		P	80 - 120
Carfentrazone Ethyl	99.3		P	80 - 120
Chlorpyrifos Ethyl	93.4		P	80 - 120
Chlorpyrifos Methyl	94.1		P	80 - 120
Cyanazine	90.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A102583
Included Lab Sample IDs: 2211877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Demeton	91.3		P	80 - 120
Diazinon	99.5		P	80 - 120
Difenoconazole	97.7		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	92.4		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	98.1		P	80 - 120
Ethion	90.1		P	80 - 120
Ethoprop	96.2		P	80 - 120
Fenamiphos	92.1		P	80 - 120
Fenbuconazole	98.7		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	98.1		P	80 - 120
Fipronil Sulfide	98.5		P	80 - 120
Fipronil Sulfone	92.8		P	80 - 120
Fluazifop-P-butyl	101		P	80 - 120
Fludioxonil	99.4		P	80 - 120
Flumioxazin	89.4		P	80 - 120
Flutolanil	106		P	80 - 120
Fluxapyroxad	101		P	80 - 120
Fonofos	99.2		P	80 - 120
Hexazinone	97.5		P	80 - 120
Imazalil	100		P	80 - 120
Iprodione	98.5		P	80 - 120
Malathion	91.1		P	80 - 120
Metalaxyl	107		P	80 - 120
Metolachlor	99.5		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	98.4		P	80 - 120
Myclobutanil	102		P	80 - 120
Naled	98.8		P	80 - 120
Norflurazon	97.3		P	80 - 120
Oxadiazon	107		P	80 - 120
Oxyfluorfen	96.3		P	80 - 120
Parathion Ethyl	93.9		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	93.9		P	80 - 120
Phorate	93.3		P	80 - 120
Prodiamine	95.0		P	80 - 120
Prometon	99.2		P	80 - 120
Prometryn	105		P	80 - 120
Pronamide	97.7		P	80 - 120
Propiconazole	98.5		P	80 - 120
Pyriproxyfen	98.3		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	96.2		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	90.5		P	80 - 120
Terbutylazine	99.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A102622
Included Lab Sample IDs: 2211875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.2	96.7	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A102629
Included Lab Sample IDs: 2211876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.2	100	P/P	90 - 110
Arsenic	96.3	96.1	P/P	90 - 110
Beryllium	105	104	P/P	90 - 110
Boron	100	101	P/P	90 - 110
Cadmium	95.6	96.4	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Copper	92.2	91.6	P/P	90 - 110
Lead	98.9	98.3	P/P	90 - 110
Nickel	91.6	91.0	P/P	90 - 110
Selenium	95.5	95.6	P/P	90 - 110
Silver	102	103	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A102654
Included Lab Sample IDs: 2211876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.7	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A102697
Included Lab Sample IDs: 2211844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	P/P	85 - 115

Reference Method: EPA 8321B
Run ID: A102718
Included Lab Sample IDs: 2211875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.3	106	P/P	50 - 150
Acetaminophen	120	110	P/P	60 - 160
Acetamiprid	126	109	P/P	50 - 150
Afidopyropen	91.5	104	P/P	50 - 150
Bentazon	133	109	P/P	50 - 160
Benzovindiflupyr	112	109	P/P	50 - 150
Carbamazepine	106	117	P/P	60 - 150
Clothianidin	114	111	P/P	60 - 150
Dinotefuran	101	104	P/P	50 - 150
Diuron	86.7	108	P/P	60 - 160
Fenuron	110	106	P/P	60 - 150
Fluridone	109	100	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A102718

Included Lab Sample IDs: 2211875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	98.4	106	P/P	60 - 150
Ibuprofen	100	91.9	P/P	50 - 160
Imazapyr	104	87.0	P/P	50 - 150
Imidacloprid	109	97.6	P/P	60 - 150
Linuron	113	115	P/P	60 - 150
Mandestrobin	109	109	P/P	50 - 150
MCPP	90.9	86.2	P/P	50 - 150
Naproxen	124	65.6	P/P	50 - 160
Primidone	92.8	94.4	P/P	60 - 150
Pyraclostrobin	100	108	P/P	60 - 150
Thiamethoxam	107	105	P/P	50 - 150
Tolfenpyrad	94.5	99.5	P/P	60 - 150
Triclopyr	94.2	95.7	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102729

Included Lab Sample IDs: 2211844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.5	103	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							3.21	
EPA 200.7 Rev. 4.4	Barium	93.0		100	97.6	97.7			0.0413
	Calcium	93.4		102	98.9				0.315
	Iron	95.0		106	101	101			0.123
	Magnesium	91.7		104	96.9				0.406
	Potassium	90.8		106	95.0	95.8			0.616
	Sodium	91.7		106	98.6				1.51
	Zinc	91.5		98.2	93.3	92.7			0.682
EPA 200.8 Rev. 5.4	Aluminum	100		102	101	99.2			1.02
	Antimony	103		105	105	106			0.161
	Arsenic	97.6		97.8	97.5	98.3			0.333
	Beryllium	102		103	103	103			0.386
	Boron	95.6		95.9	97.9	95.3			1.69
	Cadmium	94.2		95.6	95.6	98.1			0.0090
	Chromium	100		100	101	101			0.837
	Copper	93.1		93.2	93.4	91.3			0.263
	Lead	99.7		102	102	103			0.105
	Nickel	92.6		93.4	93.3	92.8			0.136
	Selenium	95.5		95.2	93.5	93.3			1.84
	Silver	107		108	108	107			0.111
	Thallium	98.7		102	102	102			0.288
EPA 300.0 Rev. 2.1	Chloride	98.7		96.9	95.6			0.195	
	Sulfate	99.2		96.2	98.7			0.179	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		99.8	99.6				0.145
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		101	95.2				4.34
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		98.6	98.0				0.494
EPA 365.1 Rev. 2.0	Total-P	102		102	104				1.86
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		102	104				1.17
EPA 8270E	Acetochlor	100	90.6	88.3	89.1		10.2		0.944
	Alachlor	103	93.8	71.6	67.8		9.82		5.47
	Ametryn	147	152	132	110		3.52		17.6
	Atrazine	104	98.8				4.76		2.51
	Atrazine Desethyl	106	97.7	99.3	107		8.10		7.48
	Azinphos Methyl	178	174	136	128		2.50		6.67
	Azoxystrobin	121	113	138	96.4		6.30		29.7
	Bromacil	101	90.2	98.9	77.6		11.1		14.3
	Butylate	60.2	57.5	64.0	73.0		4.60		13.0
	Carbophenothion	99.9	93.0	96.5	86.4		7.18		11.1
	Carfentrazone Ethyl	122	111	115	110		9.22		4.18
	Chlorpyrifos Ethyl	92.0	84.2	103	98.0		8.81		5.00
	Chlorpyrifos Methyl	102	95.3	85.6	77.9		7.02		9.37
	Cyanazine	131	122	95.4	93.5		6.69		1.97
	Demeton	89.5	90.5	117	123		1.08		5.45
	Diazinon	112	101	95.1	99.0		10.3		4.01
	Difenoconazole	141	129	169	137		8.94		21.0
	Dimethenamid	93.4	87.0	91.0	86.6		7.16		5.03
	Disulfoton	95.0	94.6	99.1	102		0.522		3.30
	Dithiopyr	100	86.6	61.8	58.3		14.6		5.55
	EPTC	59.0	62.0	61.2	51.0		4.87		18.1
	Ethion	81.6	82.9	78.3	74.8		1.64		4.56
	Ethoprop	93.5	88.7	103	91.8		5.25		11.2
	Fenamiphos	97.9	88.9	109	104		9.60		4.94
	Fenbuconazole	118	106	130	115		10.2		12.2
	Fipronil	119	109				9.43		5.97

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fipronil Desulfinyl	109	95.2			13.4		2.68
	Fipronil Sulfide	107	96.0			10.4		18.1
	Fipronil Sulfone	85.7	78.1			9.36		12.1
	Fluazifop-P-butyl	111	94.5	107	100	15.8		6.94
	Fludioxonil	100	98.3	112	101	1.96		10.9
	Flumioxazin	124	120	189	153	3.73		21.5
	Flutolanil	111	98.4	116	91.1	11.7		24.0
	Fluxapyroxad	101	94.1			6.64		9.69
	Fonofos	95.7	90.9	90.1	84.4	5.18		6.54
	Hexazinone	94.2	87.5	99.2	92.7	7.38		6.49
	Imazalil	117	101	123	111	14.5		10.4
	Iprodione	106	94.9	35.6	63.6	10.8		56.5
	Malathion	88.2	81.8	71.4	67.9	7.53		5.08
	Metalaxyl	111	98.7	108	102	11.6		5.56
	Metolachlor	97.1	86.4	85.6	83.0	11.7		3.14
	Metribuzin	138	122	133	123	12.4		7.58
	Mevinphos	93.0	87.7	97.8	85.3	5.91		13.7
	Molinate	78.8	76.1	84.3	74.4	3.45		12.5
	Myclobutanil	110	99.6	122	104	10.1		15.8
	Naled	45.5	47.4	34.4	36.3	4.17		5.26
	Norflurazon	110	101	120	103	8.43		15.7
	Oxadiazon	101	89.8	53.9	52.9	11.3		1.89
	Oxyfluorfen	124	118	170	155	5.25		8.94
	Parathion Ethyl	100	96.7	104	103	3.70		1.06
	Parathion Methyl	123	112	129	119	9.73		8.42
	Pendimethalin	86.3	79.2	111	107	8.58		3.49
	Phorate	114	113	87.8	87.4	1.34		0.538
	Prodiamine	113	101	124	56.7	11.6		74.3
	Prometon	100	93.5	103	87.2	6.92		13.4
	Prometryn	119	107	117	108	10.2		8.79
	Pronamide	109	102	104	116	6.06		11.0
	Propiconazole	110	103	116	93.2	6.98		14.8
	Pyriproxyfen	104	94.5	114	103	9.09		10.4
	Simazine	103	99.4			4.01		12.4
	Sulfentrazone	95.5	92.2	101	95.4	3.57		4.66
	Tebuconazole	54.7	51.4			6.29		9.58
	Terbufos	92.9	87.4	110	109	6.11		1.15
	Terbutylazine	99.7	90.5	104	99.2	9.66		4.71
EPA 8321B	2,4-D	100		72.9	75.6			3.63
	Acesulfame K	102		92.0	91.9			0.137
	Acetaminophen	77.3		56.8	59.6			4.83
	Acetamiprid	113		99.2	78.6			23.2
	Afidopyropen	69.2		58.1	45.7			23.9
	AMPA	90.8		127	123			3.00
	Bentazon	51.7		57.6	58.4			1.47
	Benzovindiflupyr	94.3		74.8	73.7			1.47
	Carbamazepine	76.6		55.3	55.6			0.653
	Clothianidin	90.9		72.8	77.0			5.56
	Dinotefuran	92.8		95.1	89.5			6.03
	Diuron	50.5		44.4	39.1			12.8
	Endothall	94.9		114	110			4.07
	Fenuron	107		77.1	76.8			0.365
	Fluridone	91.4		66.2	70.9			6.91
	Glufosinate	97.7		95.4	108			12.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Glyphosate	80.5	80.9	97.1			18.2
	Hydrocodone	95.5	94.7	95.0			0.315
	Ibuprofen	53.3	36.0	41.6			14.5
	Imazapyr	73.4	70.6	64.9			8.42
	Imidacloprid	121	129	122			6.11
	Linuron	60.7	53.2	50.5			5.32
	Mandestrobin	91.3	75.5	66.6			12.5
	MCP	109	77.8	71.0			9.22
	Naproxen	43.7	37.3	53.1			35.0
	Primidone	79.7	70.3	68.8			2.12
	Pyraclostrobin	74.9	74.4	69.4			6.97
	Sucralose	103	99.9	103			2.10
	Thiamethoxam	102	118	120			1.90
	Tolfenpyrad	60.4	50.8	51.5			1.24
	Triclopyr	110	88.2	77.3			13.2
SM 2120 B-2011	Color (true)	102				0.424	
SM 2320 B-2011	Total Alkalinity	103				1.88	
SM 2540 C-2011	TDS					2.34	
SM 4500 F-C-2011	Fluoride	95.6	98.4	96.4			1.43
SM 5310 B-2011	Organic Carbon	99.2	99.5	99.5			0.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2211843
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2211876
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2211876
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2211843
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2211843
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2211844
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2211844
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2211844
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2211844
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2211845
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2211877
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2211875
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2211875
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2211843
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2211843
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2211876
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2211843
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2211843
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2211843
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2211844

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	12/09/2020			12/09/2020 15:09	Yen Ta	2211843
EPA 200.7 Rev. 4.4	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/11/2020 19:02	Betina Topolski	2211876
EPA 200.8 Rev. 5.4	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/16/2020 20:18	Alexander Thompson	2211876
	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/17/2020 18:47	Alexander Thompson	2211876
EPA 300.0 Rev. 2.1	12/09/2020			12/11/2020 15:55	Lipi Saha	2211843
EPA 350.1 Rev. 2.0	12/09/2020			12/14/2020 17:06	Ping Hua	2211844
EPA 351.2 Rev. 2.0	12/09/2020	12/21/2020 14:46	David Boose	12/22/2020 14:11	Julia Storbeck	2211844
EPA 353.2 Rev. 2.0	12/09/2020			12/10/2020 10:49	Beverly Y. Sanders	2211844
EPA 365.1 Rev. 2.0	12/09/2020	12/11/2020 17:49	Madeline Gruver	12/17/2020 18:07	Benjamin T. Nordmann	2211844
EPA 365.1 Rev. 2.0 dissolved	12/09/2020			12/09/2020 14:43	Blanca Fach	2211845
EPA 8270E	12/09/2020	12/11/2020 08:00	Fe-Val Siddell	12/14/2020 17:23	Vandana T. Nagar	2211877
EPA 8321B	12/09/2020	12/11/2020 10:00	Hoor Shaik	12/20/2020 06:24	Juyoung Kim	2211875
	12/09/2020	12/11/2020 11:30	Rebecca Ware	12/11/2020 19:26	Rebecca Ware	2211875
	12/09/2020	12/11/2020 11:30	Rebecca Ware	12/15/2020 12:47	Rebecca Ware	2211875
SM 2120 B-2011	12/09/2020			12/09/2020 17:35	Benjamin T. Nordmann	2211843
SM 2320 B-2011	12/09/2020			12/15/2020 01:13	Dale L. Simmons	2211843
SM 2340B	12/09/2020			12/11/2020 19:02	Betina Topolski	2211876
SM 2540 C-2011	12/09/2020			12/14/2020 14:56	Yijie Li	2211843
SM 2540 D-2011	12/09/2020			12/14/2020 15:56	Yijie Li	2211843
SM 4500 F-C-2011	12/09/2020			12/10/2020 19:06	Dale L. Simmons	2211843
SM 5310 B-2011	12/09/2020			12/11/2020 01:25	Madeline Gruver	2211844