

Chemical Analysis Report

CEN-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 Creek SCI**
Request ID: **RQ-2020-11-30-12**
Customer: **CEN-DIST**
Project ID: **SMP**

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

Date Certified: 04-JAN-2021 07:50

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: Sand Creek @ 100m Us Of Cr 415

Collection Date/Time: 12/08/2020 13:16

Field ID: G5CE0094

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211695	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P390933	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P391016	
		Sulfate	1.4		mg SO4/L	P391017	
	SM 2120 B-2011	Color (true)	680		PCU	P390946	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P391136	
	SM 2540 C-2011	TDS	115		mg/L	P391518	
	SM 2540 D-2011	TSS	2	I	mg/L	P391523	
2211696	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P391030	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P391081	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P391647	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P390961	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P391616	
2211697	SM 5310 B-2011	Organic Carbon	56		mg C/L	P391060	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P390931	
2211700	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**	0.24		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	0.034		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**	0.15		ug/L	P390959	
		Hydrocodone**	0.0020	U	ug/L	P390959	
		Ibuprofen**	0.020	U	ug/L	P390959	
		Imidacloprid	0.0059	I	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: G5CE0094

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211700	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P390959	
		Triclopyr**	0.0040	U	ug/L	P390959	
2211701	EPA 200.7 Rev. 4.4	Iron	870		ug/L	P390978	
		Manganese	7.4		ug/L	P390978	
		Zinc	5.0	U	ug/L	P390978	
	EPA 200.8 Rev. 5.4	Aluminum	592		ug/L	P390978	
		Antimony	0.050	U	ug/L	P390978	
		Arsenic	0.32		ug/L	P390978	
		Beryllium	0.038	I	ug/L	P390978	
		Cadmium	0.020	U	ug/L	P390978	
		Chromium	0.77	I	ug/L	P390978	
		Copper	0.40	U	ug/L	P390978	
		Lead	0.56		ug/L	P390978	
		Nickel	0.55	I	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	19.2		mg/L	P390978	
2211708	EPA 8270E	Acetochlor	0.24	U	ng/L	P390895	
		Alachlor	0.24	U	ng/L	P390895	
		Ametryn	0.59	UJ	ng/L	P390895	LCS
		Atrazine	17		ng/L	P390895	
		Atrazine Desethyl	1.9	I	ng/L	P390895	
		Azinphos Methyl	2.0	UJ	ng/L	P390895	LCS
		Azoxystrobin**	0.49	U	ng/L	P390895	
		Bromacil	0.49	U	ng/L	P390895	
		Butylate	0.39	U	ng/L	P390895	
		Carbophenothion	0.49	U	ng/L	P390895	
		Carfentrazone Ethyl**	0.098	U	ng/L	P390895	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P390895	
		Chlorpyrifos Methyl	0.049	U	ng/L	P390895	
		Cyanazine	3.2	U	ng/L	P390895	
		Demeton	1.5	U	ng/L	P390895	
		Diazinon	0.12	U	ng/L	P390895	
		Difenoconazole**	0.59	U	ng/L	P390895	MS
		Dimethenamid**	0.098	U	ng/L	P390895	
		Disulfoton	0.49	U	ng/L	P390895	
		Dithiopyr**	0.098	U	ng/L	P390895	MS
		EPTC	1.2	U	ng/L	P390895	
		Ethion	0.15	U	ng/L	P390895	
		Ethoprop	0.098	U	ng/L	P390895	
		Fenamiphos	0.49	U	ng/L	P390895	
		Fenbuconazole**	0.12	U	ng/L	P390895	
		Fipronil	0.24	U	ng/L	P390895	
		Fipronil Desulfinyl**	0.12	U	ng/L	P390895	

Field ID: G5CE0094

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211708	EPA 8270E	Fipronil Sulfide	0.15	U	ng/L	P390895	
		Fipronil Sulfone	0.15	U	ng/L	P390895	
		Fluazifop-P-butyl**	0.098	U	ng/L	P390895	
		Fludioxonil**	0.12	U	ng/L	P390895	
		Flumioxazin**	1.7	U	ng/L	P390895	
		Flutolanil**	0.098	U	ng/L	P390895	
		Fluxapyroxad**	0.098	U	ng/L	P390895	
		Fonofos	0.20	U	ng/L	P390895	
		Hexazinone	0.49	U	ng/L	P390895	
		Imazalil**	0.73	U	ng/L	P390895	
		Iprodione**	0.59	U	ng/L	P390895	MS, RPD
		Malathion	0.34	U	ng/L	P390895	
		Metaxyl	0.73	U	ng/L	P390895	
		Metolachlor	0.49	U	ng/L	P390895	
		Metribuzin	3.2	U	ng/L	P390895	
		Mevinphos	0.49	U	ng/L	P390895	
		Molinate	0.29	U	ng/L	P390895	
		Myclobutanil**	0.24	U	ng/L	P390895	
		Naled**	1.5	U	ng/L	P390895	
		Norflurazon	0.49	U	ng/L	P390895	
		Oxadiazon	0.098	U	ng/L	P390895	MS
		Oxyfluorfen**	0.15	U	ng/L	P390895	MS
		Parathion Ethyl	0.24	U	ng/L	P390895	
		Parathion Methyl	0.54	U	ng/L	P390895	
		Pendimethalin	0.98	U	ng/L	P390895	
		Phorate	0.24	U	ng/L	P390895	
		Prodiamine**	0.17	U	ng/L	P390895	RPD
		Prometon	0.88	U	ng/L	P390895	
		Prometryn	0.20	U	ng/L	P390895	
		Pronamide**	0.15	U	ng/L	P390895	
		Propiconazole**	0.49	U	ng/L	P390895	
		Pyriproxyfen**	0.12	U	ng/L	P390895	
		Simazine	0.51	I	ng/L	P390895	
		Sulfentrazone**	0.49	U	ng/L	P390895	
		Tebuconazole**	0.49	U	ng/L	P390895	
		Terbufos	0.098	U	ng/L	P390895	
		Terbuthylazine	0.42	U	ng/L	P390895	

Ref. Method and Comment:

SM 2120 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 12/17/2020.

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: P390933

Component	Result	Code	Units
Turbidity	0.10	U	NTU

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

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/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
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: P391016

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391017

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391081

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P390961

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P391616

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P390895

Component	Result	Code	Units
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: 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
Afidopyrophen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P390959

Component	Result	Code	Units
Mandestrobin	0.0020	U	ug/L
MCP	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: P390946

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P391136

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /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

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

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P391060

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
Iron	95.0		P	85 - 115
Manganese	93.4		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
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: P391016

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391081

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390961

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P391616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	101		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
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
Metaxyl	111	98.7	P/P	21 - 148

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P390895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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
Terbuthylazine	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
Mandestrobin	91.3		P	30 - 160
MCPP	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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P390959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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: P390946

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P391136

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: P391060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		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	Iron	106		P	80 - 120
2211689	Manganese	105		P	80 - 120
2211689	Zinc	98.2		P	80 - 120
2211748	Iron	101	101	P/P	80 - 120
2211748	Manganese	98.2	98.1	P/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	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	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: P391016

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211305	Chloride	99.0		P	90 - 110
2211680	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211305	Sulfate	99.6		P	90 - 110
2211680	Sulfate	98.0		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391081

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212207	Ammonia-N	94.8	94.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213049	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390961

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211525	NO2NO3-N	97.1	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213256	Total-P	106	103	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
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

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	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
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

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	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: P391060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211260	Organic Carbon	98.4	98.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211680	Turbidity	6.04	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	Iron	0.123	Spike	P	0 - 20
2211748	Manganese	0.0921	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	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: P391016

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211680	Chloride	0.649	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211680	Sulfate	0.178	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391081

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212207	Ammonia-N	0.417	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213049	Kjeldahl Nitrogen	0.583	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211525	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213256	Total-P	2.20	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
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

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	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	Terbutylazine	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
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

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	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	Metalaxyl	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
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

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	Tebuconazole	6.29	LCS	P	0 - 30
LFB	Terbufos	6.11	LCS	P	0 - 30
LFB	Terbutylazine	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
2211875	Glyphosate	18.2	Spike	P	0 - 30
2211875	Sucralose	2.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P391136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212431	Total Alkalinity	1.03	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: P391060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211260	Organic Carbon	0.419	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2211700
Field Sample ID: G5CE0094

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	55.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	45.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.0	P	30 - 160
EPA 8321B	Diuron-d6	40.8	P	30 - 160
EPA 8321B	Endothall-d6	119	P	40 - 160
EPA 8321B	Endothall-d6	119	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	54.5	P	30 - 160
EPA 8321B	Primidone-d5	48.1	P	30 - 160
EPA 8321B	Sucralose-d6	99.9	P	30 - 160
EPA 8321B	Sucralose-d6	99.9	P	30 - 160

Lab Sample ID: 2211708
Field Sample ID: G5CE0094

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	97.5	P	72 - 135
EPA 8270E	Terbufos-d10	79.6	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102455

Included Lab Sample IDs: 2211695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	100	P/P	90 - 110
Sulfate	99.1	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102499

Included Lab Sample IDs: 2211697

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: 2211695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	104	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A102508

Included Lab Sample IDs: 2211695

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: 2211696

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: 2211695

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: 2211696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102553

Included Lab Sample IDs: 2211696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.4	95.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102556

Included Lab Sample IDs: 2211701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	98.0	97.7	P/P	90 - 110
Manganese	101	99.1	P/P	90 - 110
Zinc	100	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102568

Included Lab Sample IDs: 2211700

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: SM 2320 B-2011

Run ID: A102580

Included Lab Sample IDs: 2211695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.9	103	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A102583

Included Lab Sample IDs: 2211708

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
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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A102583
 Included Lab Sample IDs: 2211708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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

Reference Method: EPA 8321B
 Run ID: A102622
 Included Lab Sample IDs: 2211700

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102629

Included Lab Sample IDs: 2211701

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
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: 2211701

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

Reference Method: EPA 8321B

Run ID: A102718

Included Lab Sample IDs: 2211700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.2	89.3	P/P	50 - 150
Acetaminophen	112	120	P/P	60 - 160
Acetamiprid	109	126	P/P	50 - 150
Afidopyropen	105	91.5	P/P	50 - 150
Bentazon	98.8	133	P/P	50 - 160
Benzovindiflupyr	110	112	P/P	50 - 150
Carbamazepine	108	106	P/P	60 - 150
Clothianidin	116	114	P/P	60 - 150
Dinotefuran	105	101	P/P	50 - 150
Diuron	88.2	86.7	P/P	60 - 160
Fenuron	107	110	P/P	60 - 150
Fluridone	111	109	P/P	60 - 160
Hydrocodone	101	98.4	P/P	60 - 150
Ibuprofen	106	100	P/P	50 - 160
Imazapyr	96.4	104	P/P	50 - 150
Imidacloprid	96.4	109	P/P	60 - 150
Linuron	104	113	P/P	60 - 150
Mandestrobin	101	109	P/P	50 - 150
MCPP	91.7	90.9	P/P	50 - 150
Naproxen	110	124	P/P	50 - 160
Primidone	91.0	92.8	P/P	60 - 150
Pyraclostrobin	106	100	P/P	60 - 150
Thiamethoxam	103	107	P/P	50 - 150
Tolfenpyrad	103	94.5	P/P	60 - 150
Triclopyr	86.3	94.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102764

Included Lab Sample IDs: 2211696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102770

Included Lab Sample IDs: 2211696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	102	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	MS
								SMP	
EPA 180.1 Rev. 2.0	Turbidity							6.04	
EPA 200.7 Rev. 4.4	Iron	95.0		106	101	101			0.123
	Manganese	93.4		105	98.2	98.1			0.0921
	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
	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	98.3		97.7	99.0			0.649	
	Sulfate	99.1		98.0	99.6			0.178	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6		94.8	94.2				0.417
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		100	101				0.583
EPA 353.2 Rev. 2.0	NO2NO3-N	102		97.1	96.1				0.976
EPA 365.1 Rev. 2.0	Total-P	101		106	103				2.20
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
	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	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
	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Linuron	60.7	53.2	50.5			5.32
	Mandestrobin	91.3	75.5	66.6			12.5
	MCCP	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)	101					
SM 2320 B-2011	Total Alkalinity	103				1.03	
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	98.2	98.4	98.9			0.419

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2211695
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2211701
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2211701
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2211695
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2211695
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2211696
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2211696
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2211696
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2211696
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2211697
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2211708
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2211700
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2211700
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2211695
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2211695
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2211701
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2211695
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2211695
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2211695
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2211696

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	2211695
EPA 200.7 Rev. 4.4	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/11/2020 17:18	Betina Topolski	2211701
EPA 200.8 Rev. 5.4	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/16/2020 19:34	Alexander Thompson	2211701
	12/09/2020	12/10/2020 15:00	Elliott D. Healy	12/17/2020 18:20	Alexander Thompson	2211701
EPA 300.0 Rev. 2.1	12/09/2020			12/10/2020 20:29	Lipi Saha	2211695
EPA 350.1 Rev. 2.0	12/09/2020			12/13/2020 16:19	Ping Hua	2211696
EPA 351.2 Rev. 2.0	12/09/2020	12/22/2020 14:29	David Boose	12/23/2020 16:12	Julia Storbeck	2211696
EPA 353.2 Rev. 2.0	12/09/2020			12/10/2020 11:08	Beverly Y. Sanders	2211696
EPA 365.1 Rev. 2.0	12/09/2020	12/22/2020 13:26	Yen Ta	12/23/2020 13:53	Shengyu Wang	2211696
EPA 365.1 Rev. 2.0 dissolved	12/09/2020			12/09/2020 14:41	Blanca Fach	2211697
EPA 8270E	12/09/2020	12/11/2020 08:00	Fe-Val Siddell	12/14/2020 16:57	Vandana T. Nagar	2211708
EPA 8321B	12/09/2020	12/11/2020 10:00	Hoor Shaik	12/20/2020 05:15	Juyoung Kim	2211700
	12/09/2020	12/11/2020 11:30	Rebecca Ware	12/11/2020 19:40	Rebecca Ware	2211700
	12/09/2020	12/11/2020 11:30	Rebecca Ware	12/15/2020 12:59	Rebecca Ware	2211700
SM 2120 B-2011	12/09/2020			12/09/2020 17:34	Benjamin T. Nordmann	2211695
SM 2320 B-2011	12/09/2020			12/14/2020 21:06	Dale L. Simmons	2211695
SM 2340B	12/09/2020			12/11/2020 17:18	Betina Topolski	2211701
SM 2540 C-2011	12/09/2020			12/14/2020 14:56	Yijie Li	2211695
SM 2540 D-2011	12/09/2020			12/14/2020 15:56	Yijie Li	2211695
SM 4500 F-C-2011	12/09/2020			12/10/2020 18:29	Dale L. Simmons	2211695
SM 5310 B-2011	12/09/2020			12/10/2020 21:19	Madeline Gruver	2211696