

Chemical Analysis Report

NE-DIST-2021-02-05-01

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

Event Description: **LSJR SCI's**
Request ID: **RQ-2021-02-01-66**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 01-MAR-2021 12:42



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: Wills BR N FOrk @ Old Middleburg Rd

Collection Date/Time: 02/04/2021 11:45

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223669	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P393510	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P393613	
		Sulfate	22		mg SO4/L	P393616	
	SM 2120 B-2011	Color (true)	39		PCU	P393448	
	SM 2320 B-2011	Total Alkalinity	59		mg CaCO3/L	P393639	
	SM 2540 C-2011	TDS	154	A	mg/L	P393819	
	SM 2540 D-2011	TSS	2	IA	mg/L	P393812	
	SM 4500 F-C-2011	Fluoride	0.061	I	mg F/L	P393645	
2223670	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P393633	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P393722	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.42		mg N/L	P393531	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P393627	
	SM 5310 B-2011	Organic Carbon	7.4		mg C/L	P393623	
2223671	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P393439	
2223674	EPA 8321B	2,4-D	0.32		ug/L	P393502	
		Acesulfame K	0.18	I	ug/L	P393478	
		AMPA	0.10	U	ug/L	P393478	
		Sucralose	0.32		ug/L	P393478	
		Acetaminophen**	0.0080	U	ug/L	P393502	
		Acetamiprid**	0.0020	U	ug/L	P393502	
		Endothall	0.25	U	ug/L	P393478	
		Glufosinate	0.10	U	ug/L	P393478	
		Glyphosate	0.25	I	ug/L	P393478	
		Afidopyropen**	0.0020	U	ug/L	P393502	
		Bentazon	0.038		ug/L	P393502	
		Benzovindiflupyr**	0.0020	U	ug/L	P393502	
		Carbamazepine**	8.0E-04	U	ug/L	P393502	
		Clothianidin**	0.0020	U	ug/L	P393502	
		Dinotefuran**	0.0020	U	ug/L	P393502	
		Diuron	0.0092		ug/L	P393502	
		Fenuron	0.016	U	ug/L	P393502	
		Fluridone**	0.0097		ug/L	P393502	
		Imazapyr**	0.21		ug/L	P393502	
		Hydrocodone**	0.0020	U	ug/L	P393502	
		Ibuprofen**	0.020	U	ug/L	P393502	
		Imidacloprid	0.0046	I	ug/L	P393502	
		Linuron	0.0040	U	ug/L	P393502	
		Mandestrobin**	0.0020	U	ug/L	P393502	
		MCP	0.0020	U	ug/L	P393502	
		Naproxen**	0.0080	U	ug/L	P393502	
		Primidone**	0.0040	U	ug/L	P393502	
		Pyraclostrobin**	0.0020	U	ug/L	P393502	
		Thiamethoxam**	0.0020	U	ug/L	P393502	

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223674	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P393502	
		Triclopyr**	0.0040	U	ug/L	P393502	
2223675	EPA 200.7 Rev. 4.4	Barium	36.6		ug/L	P393508	
		Calcium	29.9		mg/L	P393508	
		Iron	420		ug/L	P393508	
		Magnesium	3.57		mg/L	P393508	
		Manganese	15.4		ug/L	P393508	
		Potassium	2.4		mg/L	P393508	
		Sodium	11.9		mg/L	P393508	
		Zinc	5.9	I	ug/L	P393508	
	EPA 200.8 Rev. 5.4	Aluminum	100		ug/L	P393508	
		Antimony	0.45		ug/L	P393508	
		Arsenic	0.31		ug/L	P393508	
		Beryllium	0.016	I	ug/L	P393508	
		Boron**	34.1		ug/L	P393508	
		Cadmium	0.020	U	ug/L	P393508	
		Chromium	0.40	U	ug/L	P393508	
		Copper	1.46		ug/L	P393508	
		Lead	0.21	I	ug/L	P393508	
		Nickel	0.50	U	ug/L	P393508	
		Selenium	0.20	U	ug/L	P393508	
		Silver	0.010	U	ug/L	P393508	
		Thallium	0.10	U	ug/L	P393508	
	SM 2340B	Hardness	89.3		mg/L	P393508	
2223676	EPA 8270E	Acetochlor	0.24	U	ng/L	P393497	
		Alachlor	0.24	U	ng/L	P393497	
		Ametryn	0.58	U	ng/L	P393497	
		Atrazine	44		ng/L	P393497	
		Atrazine Desethyl	5.0	I	ng/L	P393497	
		Azinphos Methyl	1.9	UJ	ng/L	P393497	CCV
		Azoxystrobin**	0.48	U	ng/L	P393497	
		Bromacil	9.1		ng/L	P393497	
		Butylate	0.38	U	ng/L	P393497	
		Caffeine**	16	I	ng/L	P393497	MS, RPD
		Carbophenothion	0.48	U	ng/L	P393497	
		Carfentrazone Ethyl**	0.096	U	ng/L	P393497	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P393497	
		Chlorpyrifos Methyl	0.048	U	ng/L	P393497	
		Cyanazine	3.1	U	ng/L	P393497	
		Demeton	1.4	U	ng/L	P393497	
		Diazinon	0.12	U	ng/L	P393497	
		Difenoconazole**	0.58	U	ng/L	P393497	
		Dimethenamid**	0.096	U	ng/L	P393497	
		Disulfoton	0.48	U	ng/L	P393497	
		Dithiopyr**	0.27	IJ	ng/L	P393497	LCS

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223676	EPA 8270E	EPTC	1.2	U	ng/L	P393497	
		Ethion	0.14	U	ng/L	P393497	
		Ethoprop	0.096	U	ng/L	P393497	
		Fenamiphos	0.48	U	ng/L	P393497	
		Fenbuconazole**	0.12	U	ng/L	P393497	
		Fipronil	0.36	I	ng/L	P393497	
		Fipronil DesulfinyI**	0.51		ng/L	P393497	
		Fipronil Sulfide	0.42	I	ng/L	P393497	
		Fipronil Sulfone	0.90		ng/L	P393497	
		Fluazifop-P-butyl**	0.096	U	ng/L	P393497	
		Fludioxonil**	0.12	U	ng/L	P393497	
		Flumioxazin**	1.7	U	ng/L	P393497	
		Flutolanil**	0.096	U	ng/L	P393497	
		Fluxapyroxad**	0.096	U	ng/L	P393497	
		Fonofos	0.19	U	ng/L	P393497	
		Hexazinone	0.48	U	ng/L	P393497	
		Imazalil**	0.72	U	ng/L	P393497	
		Iprodione**	0.58	U	ng/L	P393497	
		Malathion	0.34	U	ng/L	P393497	
		Metalaxyl	0.72	U	ng/L	P393497	
		Metolachlor	0.34	U	ng/L	P393497	
		Metribuzin	3.1	U	ng/L	P393497	
		Mevinphos	1.0	U	ng/L	P393497	
		Molinate	0.29	U	ng/L	P393497	
		Myclobutanil**	0.48	I	ng/L	P393497	
		Naled**	1.4	U	ng/L	P393497	
		Norflurazon	0.48	U	ng/L	P393497	
		Oxadiazon	0.69	I	ng/L	P393497	
		Oxyfluorfen**	0.14	U	ng/L	P393497	
		Parathion Ethyl	0.24	U	ng/L	P393497	
		Parathion Methyl	0.53	U	ng/L	P393497	
		Pendimethalin	0.96	U	ng/L	P393497	
		Phorate	0.51	UJ	ng/L	P393497	RPD
		Prodiamine**	0.86		ng/L	P393497	
		Prometon	0.87	U	ng/L	P393497	
		Prometryn	0.19	U	ng/L	P393497	
		Pronamide**	0.14	U	ng/L	P393497	
		Propiconazole**	1.9	I	ng/L	P393497	
		Pyriproxyfen**	0.12	U	ng/L	P393497	
		Simazine	45		ng/L	P393497	
		Sulfentrazone**	2.6		ng/L	P393497	
		Tebuconazole**	0.48	U	ng/L	P393497	RPD
		Terbufos	0.096	U	ng/L	P393497	
		Terbuthylazine	0.41	U	ng/L	P393497	

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
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: P393510

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393508

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
Manganese	1.0	U	ug/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: P393508

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: P393613

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393616

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393633

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: P393722

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393531

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393627

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393439

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

Reference Method: EPA 8270E
Batch ID: P393497

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
Caffeine	5.0	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	0.18	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P393497

Component	Result	Code	Units
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	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	0.30	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	0.52	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: P393478

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P393502

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

Reference Method: SM 2120 B-2011

Batch ID: P393448

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P393639

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

Reference Method: SM 2540 C-2011

Batch ID: P393819

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P393812

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P393645

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393623

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: P393508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	96.8		P	85 - 115
Calcium	105		P	85 - 115
Iron	104		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	98.6		P	85 - 115
Potassium	98.9		P	85 - 115
Sodium	103		P	85 - 115
Zinc	93.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.0		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	96.7		P	85 - 115
Beryllium	89.3		P	85 - 115
Boron	96.8		P	85 - 115
Cadmium	93.7		P	85 - 115
Chromium	92.6		P	85 - 115
Copper	93.6		P	85 - 115
Lead	96.9		P	85 - 115
Nickel	92.6		P	85 - 115
Selenium	96.9		P	85 - 115
Silver	100		P	85 - 115
Thallium	95.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393613

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393616

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393633

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393722

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P393531

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393627

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393439

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

Reference Method: EPA 8270E

Batch ID: P393497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	82.7	83.1	P/P	70 - 121
Alachlor	75.4	77.5	P/P	70 - 119
Ametryn	91.9	88.0	P/P	61 - 135
Atrazine	91.1	89.0	P/P	76 - 123
Atrazine Desethyl	73.4	78.4	P/P	35 - 140
Azinphos Methyl	80.3	82.7	P/P	57 - 163
Azoxystrobin	153	170	P/P	43 - 231
Bromacil	67.2	73.9	P/P	42 - 123
Butylate	56.8	55.0	P/P	34 - 92.0
Caffeine	81.5	81.1	P/P	70 - 130
Carbophenothion	69.0	74.1	P/P	61 - 121
Carfentrazone Ethyl	75.8	78.4	P/P	62 - 139
Chlorpyrifos Ethyl	72.4	73.7	P/P	67 - 121
Chlorpyrifos Methyl	84.0	89.7	P/P	67 - 120
Cyanazine	97.1	94.7	P/P	20 - 226
Demeton	75.0	78.2	P/P	35 - 125
Diazinon	85.1	85.2	P/P	70 - 122
Difenoconazole	142	134	P/P	56 - 186
Dimethenamid	78.1	77.1	P/P	67 - 119
Disulfoton	69.1	75.8	P/P	47 - 120
Dithiopyr	68.1	65.8	P/F	67 - 118
EPTC	52.7	52.0	P/P	33 - 90.0
Ethion	72.3	69.0	P/P	40 - 133
Ethoprop	81.3	82.0	P/P	61 - 121
Fenamiphos	78.1	82.9	P/P	31 - 139
Fenbuconazole	98.8	95.2	P/P	66 - 141
Fipronil	84.8	83.4	P/P	62 - 129
Fipronil Desulfinyl	78.1	80.1	P/P	59 - 126
Fipronil Sulfide	75.3	76.3	P/P	63 - 117
Fipronil Sulfone	62.7	65.3	P/P	57 - 117
Fluazifop-P-butyl	68.8	72.4	P/P	63 - 124
Fludioxonil	70.2	69.2	P/P	63 - 123
Flumioxazin	196	175	P/P	34 - 245
Flutolanil	79.6	78.8	P/P	56 - 131

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P393497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	69.8	65.9	P/P	57 - 117
Fonofos	74.5	76.6	P/P	61 - 116
Hexazinone	77.1	76.4	P/P	55 - 138
Imazalil	66.5	73.4	P/P	33 - 143
Iprodione	72.8	74.8	P/P	59 - 118
Malathion	98.1	100	P/P	62 - 138
Metalaxyl	70.9	71.9	P/P	24 - 147
Metolachlor	75.0	75.0	P/P	68 - 118
Metribuzin	89.3	92.4	P/P	20 - 239
Mevinphos	74.6	73.7	P/P	46 - 124
Molinate	63.6	62.6	P/P	46 - 100
Myclobutanil	74.4	74.6	P/P	32 - 149
Naled	55.5	55.1	P/P	32 - 95.0
Norflurazon	66.5	69.2	P/P	57 - 127
Oxadiazon	67.8	68.1	P/P	63 - 118
Oxyfluorfen	82.4	79.2	P/P	69 - 137
Parathion Ethyl	77.6	77.0	P/P	70 - 113
Parathion Methyl	99.1	98.9	P/P	71 - 130
Pendimethalin	67.7	67.9	P/P	55 - 118
Phorate	79.3	111	P/P	46 - 125
Prodiamine	41.8	50.2	P/P	20 - 141
Prometon	76.0	76.9	P/P	54 - 122
Prometryn	82.9	82.4	P/P	66 - 124
Pronamide	88.2	86.8	P/P	79 - 122
Propiconazole	71.4	73.0	P/P	61 - 126
Pyriproxyfen	72.1	73.0	P/P	52 - 131
Simazine	84.7	88.3	P/P	75 - 128
Sulfentrazone	59.0	59.6	P/P	20 - 132
Tebuconazole	28.1	26.8	P/P	20 - 116
Terbufos	78.2	77.5	P/P	61 - 117
Terbutylazine	82.1	82.8	P/P	74 - 116

Reference Method: EPA 8321B
Batch ID: P393478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	118		P	40 - 150
AMPA	96.6		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P393502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	30 - 160
Acetaminophen	91.0		P	30 - 160
Acetamiprid	91.7		P	30 - 160
Afidopyropen	62.5		P	30 - 160
Bentazon	90.7		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P393502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Benzovindiflupyr	75.6		P	30 - 160
Carbamazepine	98.7		P	30 - 160
Clothianidin	99.0		P	30 - 160
Dinotefuran	83.9		P	30 - 160
Diuron	62.7		P	30 - 160
Fenuron	95.6		P	30 - 160
Fluridone	87.5		P	30 - 160
Hydrocodone	94.0		P	30 - 160
Ibuprofen	86.1		P	30 - 160
Imazapyr	98.0		P	30 - 160
Imidacloprid	99.7		P	30 - 160
Linuron	69.5		P	30 - 160
Mandestrobin	81.1		P	30 - 160
MCPP	102		P	30 - 160
Naproxen	46.8		P	30 - 160
Primidone	90.7		P	30 - 160
Pyraclostrobin	74.3		P	30 - 160
Thiamethoxam	86.2		P	30 - 160
Tolfenpyrad	36.9		P	30 - 160
Triclopyr	90.0		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P393448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P393639

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

Reference Method: SM 4500 F-C-2011
Batch ID: P393645

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P393623

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223662	Barium	102		P	80 - 120
2223662	Calcium	107		P	80 - 120
2223662	Iron	105		P	80 - 120
2223662	Magnesium	107		P	80 - 120
2223662	Manganese	103		P	80 - 120
2223662	Potassium	105		P	80 - 120
2223662	Sodium	104		P	80 - 120
2223662	Zinc	99.6		P	80 - 120
2223704	Barium	102	101	P/P	80 - 120
2223704	Calcium	112	109	P/P	80 - 120
2223704	Iron	109	106	P/P	80 - 120
2223704	Magnesium	111	107	P/P	80 - 120
2223704	Manganese	103	103	P/P	80 - 120
2223704	Potassium	101	99.9	P/P	80 - 120
2223704	Sodium	104	102	P/P	80 - 120
2223704	Zinc	100	99.4	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223662	Aluminum	93.8		P	80 - 120
2223662	Antimony	102		P	80 - 120
2223662	Arsenic	93.2		P	80 - 120
2223662	Beryllium	85.3		P	80 - 120
2223662	Boron	94.4		P	80 - 120
2223662	Cadmium	91.1		P	80 - 120
2223662	Chromium	89.5		P	80 - 120
2223662	Copper	91.9		P	80 - 120
2223662	Lead	96.8		P	80 - 120
2223662	Nickel	90.2		P	80 - 120
2223662	Selenium	93.1		P	80 - 120
2223662	Silver	98.2		P	80 - 120
2223662	Thallium	95.1		P	80 - 120
2223704	Aluminum	94.3	99.1	P/P	80 - 120
2223704	Antimony	99.8	103	P/P	80 - 120
2223704	Arsenic	92.1	95.5	P/P	80 - 120
2223704	Beryllium	86.0	86.4	P/P	80 - 120
2223704	Boron	93.7	99.9	P/P	80 - 120
2223704	Cadmium	90.7	92.8	P/P	80 - 120
2223704	Chromium	88.3	92.8	P/P	80 - 120
2223704	Copper	90.3	94.1	P/P	80 - 120
2223704	Lead	95.0	98.6	P/P	80 - 120
2223704	Nickel	89.3	93.6	P/P	80 - 120
2223704	Selenium	90.9	94.5	P/P	80 - 120
2223704	Silver	99.5	101	P/P	80 - 120
2223704	Thallium	93.7	98.1	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393613

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223595	Chloride	100		P	90 - 110
2223669	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223595	Sulfate	101		P	90 - 110
2223669	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223643	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223683	Kjeldahl Nitrogen	105	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223646	NO2NO3-N	98.9	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223650	Total-P	109	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393439

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223644	O-Phosphate-P	98.4	97.0	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P393497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223762	Acetochlor	82.9	81.7	P/P	66 - 122
2223762	Alachlor	73.1	70.4	P/P	65 - 122
2223762	Ametryn	74.8	78.1	P/P	45 - 173
2223762	Atrazine	96.5	94.6	P/P	70 - 134
2223762	Atrazine Desethyl	80.8	78.4	P/P	25 - 150
2223762	Azinphos Methyl	89.0	79.0	P/P	44 - 174
2223762	Butylate	52.1	59.1	P/P	15 - 97.0
2223762	Caffeine	45.3	86.8	F/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P393497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223762	Carbophenothion	71.7	68.7	P/P	42 - 129
2223762	Carfentrazone Ethyl	75.6	67.5	P/P	62 - 145
2223762	Chlorpyrifos Ethyl	76.3	73.9	P/P	60 - 124
2223762	Chlorpyrifos Methyl	89.0	85.8	P/P	66 - 119
2223762	Cyanazine	87.5	88.8	P/P	17 - 225
2223762	Demeton	82.4	86.7	P/P	36 - 142
2223762	Diazinon	87.7	86.4	P/P	70 - 128
2223762	Dimethenamid	80.6	76.0	P/P	54 - 125
2223762	Disulfoton	75.6	74.0	P/P	49 - 133
2223762	Dithiopyr	71.9	66.5	P/P	55 - 123
2223762	EPTC	49.3	53.7	P/P	19 - 91.0
2223762	Ethion	46.3	37.2	P/P	13 - 143
2223762	Ethoprop	97.0	96.8	P/P	49 - 144
2223762	Fenamiphos	65.4	78.5	P/P	32 - 136
2223762	Fenbuconazole	101	90.3	P/P	73 - 148
2223762	Fipronil	86.9	81.8	P/P	57 - 129
2223762	Fipronil Desulfinyl	78.6	75.4	P/P	49 - 127
2223762	Fipronil Sulfide	71.1	72.9	P/P	44 - 127
2223762	Fipronil Sulfone	69.4	71.0	P/P	35 - 126
2223762	Fluazifop-P-butyl	75.6	73.3	P/P	67 - 129
2223762	Flumioxazin	196	185	P/P	38 - 279
2223762	Flutolanil	70.6	66.0	P/P	55 - 136
2223762	Fluxapyroxad	56.1	49.6	P/P	33 - 140
2223762	Fonofos	77.8	74.8	P/P	58 - 125
2223762	Hexazinone	88.5	82.3	P/P	57 - 148
2223762	Imazalil	68.0	63.0	P/P	10 - 221
2223762	Malathion	101	99.4	P/P	52 - 138
2223762	Metolachlor	73.6	71.0	P/P	58 - 122
2223762	Metribuzin	98.6	98.5	P/P	16 - 272
2223762	Mevinphos	92.1	91.8	P/P	45 - 140
2223762	Molinate	66.1	67.5	P/P	41 - 103
2223762	Myclobutanil	74.0	68.8	P/P	60 - 134
2223762	Naled	52.1	53.1	P/P	20 - 113
2223762	Oxadiazon	69.4	68.6	P/P	44 - 125
2223762	Oxyfluorfen	86.2	84.3	P/P	66 - 176
2223762	Parathion Ethyl	85.8	84.0	P/P	57 - 132
2223762	Parathion Methyl	113	109	P/P	59 - 156
2223762	Pendimethalin	80.2	78.8	P/P	59 - 129
2223762	Phorate	88.3	88.0	P/P	47 - 136
2223762	Prodiamine	53.1	50.8	P/P	10 - 159
2223762	Prometon	72.1	69.5	P/P	59 - 127
2223762	Prometryn	85.7	82.9	P/P	59 - 129
2223762	Pronamide	88.1	91.5	P/P	65 - 145
2223762	Pyriproxyfen	67.7	64.6	P/P	21 - 180
2223762	Simazine	101	97.5	P/P	63 - 147
2223762	Sulfentrazone	69.4	67.3	P/P	32 - 136
2223762	Tebuconazole	27.6	17.7	P/P	-8.3 - 117
2223762	Terbufos	88.5	87.6	P/P	61 - 131
2223762	Terbutylazine	85.4	82.9	P/P	62 - 126

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P393478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223674	Acesulfame K	109	126	P/P	40 - 150
2223674	AMPA	141	148	P/P	40 - 150
2223674	Endothall	84.8	102	P/P	40 - 150
2223674	Glufosinate	96.4	112	P/P	40 - 150
2223674	Glyphosate	82.1	86.1	P/P	40 - 150
2223674	Sucralose	111	113	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P393502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223260	2,4-D	79.3	87.2	P/P	30 - 160
2223260	Acetaminophen	107	108	P/P	30 - 160
2223260	Acetamiprid	98.5	94.0	P/P	30 - 160
2223260	Afidopyropen	74.0	80.1	P/P	30 - 160
2223260	Bentazon	44.0	41.8	P/P	30 - 160
2223260	Benzovindiflupyr	72.0	77.3	P/P	30 - 160
2223260	Carbamazepine	74.2	77.7	P/P	30 - 160
2223260	Clothianidin	88.7	97.4	P/P	30 - 160
2223260	Dinotefuran	103	96.4	P/P	30 - 160
2223260	Diuron	51.0	51.7	P/P	30 - 160
2223260	Fenuron	70.3	67.8	P/P	30 - 160
2223260	Fluridone	95.6	59.7	P/P	30 - 160
2223260	Hydrocodone	87.7	87.8	P/P	30 - 160
2223260	Ibuprofen	67.4	76.8	P/P	30 - 160
2223260	Imazapyr	101	91.1	P/P	30 - 160
2223260	Imidacloprid	123	130	P/P	30 - 160
2223260	Linuron	62.5	64.1	P/P	30 - 160
2223260	Mandestrobin	77.6	80.4	P/P	30 - 160
2223260	MCP	78.3	82.7	P/P	30 - 160
2223260	Naproxen	76.3	74.4	P/P	30 - 160
2223260	Primidone	86.9	97.9	P/P	30 - 160
2223260	Pyraclostrobin	80.2	78.0	P/P	30 - 160
2223260	Thiamethoxam	111	110	P/P	30 - 160
2223260	Tolfenpyrad	42.3	45.9	P/P	30 - 160
2223260	Triclopyr	75.1	83.5	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P393645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223691	Fluoride	98.0	96.5	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P393623

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223701	Organic Carbon	97.8	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P393510

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223594	Turbidity	0.905	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393508

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223704	Barium	0.826	Spike	P	0 - 20
2223704	Calcium	2.55	Spike	P	0 - 20
2223704	Iron	3.05	Spike	P	0 - 20
2223704	Magnesium	3.01	Spike	P	0 - 20
2223704	Manganese	0.677	Spike	P	0 - 20
2223704	Potassium	1.39	Spike	P	0 - 20
2223704	Sodium	1.26	Spike	P	0 - 20
2223704	Zinc	0.944	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393508

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223704	Aluminum	4.44	Spike	P	0 - 20
2223704	Antimony	3.39	Spike	P	0 - 20
2223704	Arsenic	3.63	Spike	P	0 - 20
2223704	Beryllium	0.422	Spike	P	0 - 20
2223704	Boron	5.76	Spike	P	0 - 20
2223704	Cadmium	2.28	Spike	P	0 - 20
2223704	Chromium	4.98	Spike	P	0 - 20
2223704	Copper	4.20	Spike	P	0 - 20
2223704	Lead	3.67	Spike	P	0 - 20
2223704	Nickel	4.68	Spike	P	0 - 20
2223704	Selenium	3.92	Spike	P	0 - 20
2223704	Silver	1.09	Spike	P	0 - 20
2223704	Thallium	4.62	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393613

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223595	Chloride	0.277	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393616

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223595	Sulfate	0.776	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P393633

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223643	Ammonia-N	0.323	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P393722

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223683	Kjeldahl Nitrogen	2.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P393531

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223646	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393627

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223650	Total-P	0.744	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393439

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223644	O-Phosphate-P	1.43	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P393497

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223762	Acetochlor	1.51	Spike	P	0 - 30
2223762	Alachlor	3.78	Spike	P	0 - 30
2223762	Ametryn	4.28	Spike	P	0 - 30
2223762	Atrazine	1.78	Spike	P	0 - 30
2223762	Atrazine Desethyl	2.91	Spike	P	0 - 30
2223762	Azinphos Methyl	11.9	Spike	P	0 - 30
2223762	Azoxystrobin	11.1	Spike	P	0 - 30
2223762	Bromacil	11.9	Spike	P	0 - 30
2223762	Butylate	12.5	Spike	P	0 - 30
2223762	Caffeine	62.7	Spike	F	0 - 30
2223762	Carbophenothion	4.30	Spike	P	0 - 30
2223762	Carfentrazone Ethyl	11.4	Spike	P	0 - 30
2223762	Chlorpyrifos Ethyl	3.13	Spike	P	0 - 30
2223762	Chlorpyrifos Methyl	3.70	Spike	P	0 - 30
2223762	Cyanazine	1.52	Spike	P	0 - 30
2223762	Demeton	5.06	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P393497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223762	Diazinon	1.49	Spike	P	0 - 30
2223762	Difenoconazole	2.46	Spike	P	0 - 30
2223762	Dimethenamid	5.92	Spike	P	0 - 30
2223762	Disulfoton	2.06	Spike	P	0 - 30
2223762	Dithiopyr	7.87	Spike	P	0 - 30
2223762	EPTC	8.45	Spike	P	0 - 30
2223762	Ethion	21.7	Spike	P	0 - 30
2223762	Ethoprop	0.285	Spike	P	0 - 30
2223762	Fenamiphos	18.2	Spike	P	0 - 30
2223762	Fenbuconazole	11.2	Spike	P	0 - 30
2223762	Fipronil	6.06	Spike	P	0 - 30
2223762	Fipronil Desulfiny	4.23	Spike	P	0 - 30
2223762	Fipronil Sulfide	2.48	Spike	P	0 - 30
2223762	Fipronil Sulfone	2.35	Spike	P	0 - 30
2223762	Fluazifop-P-butyl	3.08	Spike	P	0 - 30
2223762	Fludioxonil	2.54	Spike	P	0 - 30
2223762	Flumioxazin	5.55	Spike	P	0 - 30
2223762	Flutolanil	6.00	Spike	P	0 - 30
2223762	Fluxapyroxad	12.3	Spike	P	0 - 30
2223762	Fonofos	3.99	Spike	P	0 - 30
2223762	Hexazinone	7.30	Spike	P	0 - 30
2223762	Imazalil	7.68	Spike	P	0 - 30
2223762	Iprodione	1.75	Spike	P	0 - 30
2223762	Malathion	1.24	Spike	P	0 - 30
2223762	Metalaxyl	0.0370	Spike	P	0 - 30
2223762	Metolachlor	3.30	Spike	P	0 - 30
2223762	Metribuzin	0.0904	Spike	P	0 - 30
2223762	Mevinphos	0.397	Spike	P	0 - 30
2223762	Molinate	2.08	Spike	P	0 - 30
2223762	Myclobutanil	7.25	Spike	P	0 - 30
2223762	Naled	1.80	Spike	P	0 - 30
2223762	Norflurazon	10.8	Spike	P	0 - 30
2223762	Oxadiazon	1.20	Spike	P	0 - 30
2223762	Oxyfluorfen	2.21	Spike	P	0 - 30
2223762	Parathion Ethyl	2.13	Spike	P	0 - 30
2223762	Parathion Methyl	3.82	Spike	P	0 - 30
2223762	Pendimethalin	1.77	Spike	P	0 - 30
2223762	Phorate	0.328	Spike	P	0 - 30
2223762	Prodiamine	4.31	Spike	P	0 - 30
2223762	Prometon	3.69	Spike	P	0 - 30
2223762	Prometryn	3.28	Spike	P	0 - 30
2223762	Pronamide	3.79	Spike	P	0 - 30
2223762	Propiconazole	9.80	Spike	P	0 - 30
2223762	Pyriproxyfen	4.79	Spike	P	0 - 30
2223762	Simazine	3.45	Spike	P	0 - 30
2223762	Sulfentrazone	2.04	Spike	P	0 - 30
2223762	Tebuconazole	43.5	Spike	F	0 - 30
2223762	Terbufos	1.06	Spike	P	0 - 30
2223762	Terbuthylazine	2.93	Spike	P	0 - 30
LFB	Acetochlor	0.506	LCS	P	0 - 30
LFB	Alachlor	2.80	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P393497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	4.33	LCS	P	0 - 30
LFB	Atrazine	2.31	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.70	LCS	P	0 - 30
LFB	Azinphos Methyl	3.03	LCS	P	0 - 30
LFB	Azoxystrobin	10.6	LCS	P	0 - 30
LFB	Bromacil	9.61	LCS	P	0 - 30
LFB	Butylate	3.17	LCS	P	0 - 30
LFB	Caffeine	0.385	LCS	P	0 - 30
LFB	Carbophenothion	7.09	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.43	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.73	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.54	LCS	P	0 - 30
LFB	Cyanazine	2.52	LCS	P	0 - 30
LFB	Demeton	4.11	LCS	P	0 - 30
LFB	Diazinon	0.201	LCS	P	0 - 30
LFB	Difenoconazole	5.29	LCS	P	0 - 30
LFB	Dimethenamid	1.31	LCS	P	0 - 30
LFB	Disulfoton	9.21	LCS	P	0 - 30
LFB	Dithiopyr	3.44	LCS	P	0 - 30
LFB	EPTC	1.31	LCS	P	0 - 30
LFB	Ethion	4.70	LCS	P	0 - 30
LFB	Ethoprop	0.813	LCS	P	0 - 30
LFB	Fenamiphos	5.91	LCS	P	0 - 30
LFB	Fenbuconazole	3.76	LCS	P	0 - 30
LFB	Fipronil	1.67	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	2.57	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.34	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.04	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	5.10	LCS	P	0 - 30
LFB	Fludioxonil	1.50	LCS	P	0 - 30
LFB	Flumioxazin	11.4	LCS	P	0 - 30
LFB	Flutolanil	1.12	LCS	P	0 - 30
LFB	Fluxapyroxad	5.77	LCS	P	0 - 30
LFB	Fonofos	2.69	LCS	P	0 - 30
LFB	Hexazinone	0.887	LCS	P	0 - 30
LFB	Imazalil	9.76	LCS	P	0 - 30
LFB	Iprodione	2.71	LCS	P	0 - 30
LFB	Malathion	2.00	LCS	P	0 - 30
LFB	Metalaxyl	1.40	LCS	P	0 - 30
LFB	Metolachlor	0.0136	LCS	P	0 - 30
LFB	Metribuzin	3.41	LCS	P	0 - 30
LFB	Mevinphos	1.28	LCS	P	0 - 30
LFB	Molinate	1.53	LCS	P	0 - 30
LFB	Myclobutanil	0.325	LCS	P	0 - 30
LFB	Naled	0.805	LCS	P	0 - 30
LFB	Norflurazon	3.95	LCS	P	0 - 30
LFB	Oxadiazon	0.357	LCS	P	0 - 30
LFB	Oxyfluorfen	4.02	LCS	P	0 - 30
LFB	Parathion Ethyl	0.723	LCS	P	0 - 30
LFB	Parathion Methyl	0.136	LCS	P	0 - 30
LFB	Pendimethalin	0.327	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P393497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	33.4	LCS	F	0 - 30
LFB	Prodiamine	18.2	LCS	P	0 - 30
LFB	Prometon	1.24	LCS	P	0 - 30
LFB	Prometryn	0.630	LCS	P	0 - 30
LFB	Pronamide	1.58	LCS	P	0 - 30
LFB	Propiconazole	2.21	LCS	P	0 - 30
LFB	Pyriproxyfen	1.35	LCS	P	0 - 30
LFB	Simazine	4.23	LCS	P	0 - 30
LFB	Sulfentrazone	0.867	LCS	P	0 - 30
LFB	Tebuconazole	4.89	LCS	P	0 - 30
LFB	Terbufos	0.981	LCS	P	0 - 30
LFB	Terbutylazine	0.790	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P393478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223674	Acesulfame K	13.7	Spike	P	0 - 30
2223674	AMPA	5.09	Spike	P	0 - 30
2223674	Endothall	18.2	Spike	P	0 - 30
2223674	Glufosinate	14.8	Spike	P	0 - 30
2223674	Glyphosate	4.22	Spike	P	0 - 30
2223674	Sucralose	1.65	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P393502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223260	2,4-D	9.44	Spike	P	0 - 30
2223260	Acetaminophen	0.594	Spike	P	0 - 30
2223260	Acetamiprid	4.67	Spike	P	0 - 30
2223260	Afidopyropen	7.92	Spike	P	0 - 30
2223260	Bentazon	2.35	Spike	P	0 - 30
2223260	Benzovindiflupyr	7.09	Spike	P	0 - 30
2223260	Carbamazepine	4.12	Spike	P	0 - 30
2223260	Clothianidin	9.36	Spike	P	0 - 30
2223260	Dinotefuran	5.19	Spike	P	0 - 30
2223260	Diuron	1.41	Spike	P	0 - 30
2223260	Fenuron	3.56	Spike	P	0 - 30
2223260	Fluridone	24.4	Spike	P	0 - 30
2223260	Hydrocodone	0.0536	Spike	P	0 - 30
2223260	Ibuprofen	13.1	Spike	P	0 - 30
2223260	Imazapyr	7.94	Spike	P	0 - 30
2223260	Imidacloprid	4.72	Spike	P	0 - 30
2223260	Linuron	2.50	Spike	P	0 - 30
2223260	Mandestrobin	3.59	Spike	P	0 - 30
2223260	MCP	5.47	Spike	P	0 - 30
2223260	Naproxen	2.55	Spike	P	0 - 30
2223260	Primidone	11.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P393502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223260	Pyraclostrobin	2.84	Spike	P	0 - 30
2223260	Thiamethoxam	0.649	Spike	P	0 - 30
2223260	Tolfenpyrad	8.21	Spike	P	0 - 30
2223260	Triclopyr	10.6	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P393448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223649	Color (true)	0.669	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P393639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223691	Total Alkalinity	1.65	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223669	TDS	3.90	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P393645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223691	Fluoride	0.953	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P393623

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223701	Organic Carbon	0.211	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2223674
Field Sample ID: 20030582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	101	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.7	P	30 - 160
EPA 8321B	Diuron-d6	57.8	P	30 - 160
EPA 8321B	Endothall-d6	90.2	P	30 - 160
EPA 8321B	Endothall-d6	90.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.6	P	30 - 160
EPA 8321B	Primidone-d5	92.0	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2223676
Field Sample ID: 20030582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	55.6	P	20 - 200
EPA 8270E	Simazine-d10	92.8	P	73 - 135
EPA 8270E	Terbufos-d10	94.1	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103446

Included Lab Sample IDs: 2223671

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A103451

Included Lab Sample IDs: 2223669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.3	98.7	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103477

Included Lab Sample IDs: 2223669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103481

Included Lab Sample IDs: 2223669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.6	99.6	P/P	90 - 110
Sulfate	98.5	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103486

Included Lab Sample IDs: 2223670

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

Reference Method: EPA 8321B

Run ID: A103494

Included Lab Sample IDs: 2223674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	139	113	P/P	60 - 160
AMPA	116	116	P/P	60 - 160
Endothall	98.6	104	P/P	60 - 160
Glufosinate	90.5	94.9	P/P	60 - 160
Glyphosate	109	105	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103504

Included Lab Sample IDs: 2223675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.3	99.4	P/P	90 - 110
Calcium	100	101	P/P	90 - 110
Iron	99.6	100	P/P	90 - 110
Magnesium	99.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103504

Included Lab Sample IDs: 2223675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	102	102	P/P	90 - 110
Potassium	99.0	99.2	P/P	90 - 110
Sodium	99.1	99.8	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103516

Included Lab Sample IDs: 2223674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	106	107	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A103526

Included Lab Sample IDs: 2223670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.8	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103528

Included Lab Sample IDs: 2223670

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

Reference Method: SM 2320 B-2011

Run ID: A103529

Included Lab Sample IDs: 2223669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	95.1	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A103529

Included Lab Sample IDs: 2223669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103540

Included Lab Sample IDs: 2223670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A103561
Included Lab Sample IDs: 2223674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	108	P/P	50 - 150
Acetaminophen	109	110	P/P	60 - 160
Acetamiprid	113	109	P/P	50 - 150
Afidopyropen	116	101	P/P	50 - 150
Bentazon	145	137	P/P	50 - 160
Benzovindiflupyr	104	106	P/P	50 - 160
Carbamazepine	118	106	P/P	60 - 150
Clothianidin	109	93.6	P/P	60 - 150
Dinotefuran	102	106	P/P	50 - 150
Diuron	114	109	P/P	60 - 160
Fenuron	110	112	P/P	60 - 150
Fluridone	102	120	P/P	60 - 160
Hydrocodone	107	101	P/P	60 - 150
Ibuprofen	123	88.3	P/P	50 - 160
Imazapyr	102	101	P/P	50 - 160
Imidacloprid	96.5	99.9	P/P	60 - 150
Linuron	104	119	P/P	60 - 150
Mandestrobin	105	109	P/P	50 - 150
MCPP	102	102	P/P	50 - 150
Naproxen	85.3	65.4	P/P	50 - 160
Primidone	101	110	P/P	60 - 150
Pyraclostrobin	109	109	P/P	60 - 150
Thiamethoxam	105	98.9	P/P	50 - 150
Tolfenpyrad	102	110	P/P	60 - 150
Triclopyr	116	109	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A103591
Included Lab Sample IDs: 2223670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.0	98.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A103616
Included Lab Sample IDs: 2223675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.4	98.4	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Arsenic	96.8	94.8	P/P	90 - 110
Beryllium	92.0	92.8	P/P	90 - 110
Boron	99.8	98.4	P/P	90 - 110
Cadmium	96.4	95.9	P/P	90 - 110
Chromium	92.6	92.9	P/P	90 - 110
Copper	93.4	93.7	P/P	90 - 110
Lead	97.5	96.9	P/P	90 - 110
Nickel	93.0	93.3	P/P	90 - 110
Selenium	97.6	95.8	P/P	90 - 110
Thallium	101	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103639

Included Lab Sample IDs: 2223675

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

Reference Method: EPA 8270E

Run ID: A103642

Included Lab Sample IDs: 2223676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	98.1		P	80 - 120
Ametryn	99.7		P	80 - 120
Atrazine	97.2		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	152*		F	80 - 120
Azoxystrobin	89.9		P	80 - 120
Bromacil	99.0		P	80 - 120
Butylate	99.9		P	80 - 120
Caffeine	99.4		P	70 - 120
Carbophenothion	106		P	80 - 120
Carfentrazone Ethyl	99.7		P	80 - 120
Chlorpyrifos Ethyl	95.4		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	106		P	80 - 120
Demeton	96.8		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	105		P	80 - 120
Dimethenamid	100		P	80 - 120
Disulfoton	97.2		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	99.7		P	80 - 120
Ethion	95.9		P	80 - 120
Ethoprop	98.6		P	80 - 120
Fenamiphos	95.3		P	80 - 120
Fenbuconazole	97.7		P	80 - 120
Fipronil	99.6		P	80 - 120
Fipronil Desulfinyl	100		P	80 - 120
Fipronil Sulfide	98.0		P	80 - 120
Fipronil Sulfone	107		P	80 - 120
Fluazifop-P-butyl	104		P	80 - 120
Fludioxonil	103		P	80 - 120
Flumioxazin	102		P	80 - 120
Flutolanil	97.3		P	80 - 120
Fluxapyroxad	104		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	96.2		P	80 - 120
Imazalil	106		P	80 - 120
Iprodione	97.7		P	80 - 120
Malathion	93.0		P	80 - 120
Metalaxyl	97.9		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	96.4		P	80 - 120
Mevinphos	94.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103642
Included Lab Sample IDs: 2223676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molinate	101		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	97.5		P	80 - 120
Norflurazon	100		P	80 - 120
Oxadiazon	102		P	80 - 120
Oxyfluorfen	102		P	80 - 120
Parathion Ethyl	98.2		P	80 - 120
Parathion Methyl	103		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	99.9		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	94.9		P	80 - 120
Pronamide	95.7		P	80 - 120
Propiconazole	106		P	80 - 120
Pyriproxyfen	115		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	101		P	80 - 120
Tebuconazole	105		P	80 - 120
Terbufos	99.3		P	80 - 120
Terbutylazine	97.4		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.905	
EPA 200.7 Rev. 4.4	Barium	96.8		102	102	101			0.826
	Calcium	105		107	112	109			2.55
	Iron	104		105	109	106			3.05
	Magnesium	105		107	111	107			3.01
	Manganese	98.6		103	103	103			0.677
	Potassium	98.9		105	101	99.9			1.39
	Sodium	103		104	104	102			1.26
	Zinc	93.7		99.6	100	99.4			0.944
EPA 200.8 Rev. 5.4	Aluminum	97.0		94.3	99.1	93.8			4.44
	Antimony	104		99.8	103	102			3.39
	Arsenic	96.7		92.1	95.5	93.2			3.63
	Beryllium	89.3		86.0	86.4	85.3			0.422
	Boron	96.8		93.7	99.9	94.4			5.76
	Cadmium	93.7		90.7	92.8	91.1			2.28
	Chromium	92.6		88.3	92.8	89.5			4.98
	Copper	93.6		94.1	91.9	90.3			4.20
	Lead	96.9		95.0	98.6	96.8			3.67
	Nickel	92.6		89.3	93.6	90.2			4.68
	Selenium	96.9		90.9	94.5	93.1			3.92
	Silver	100		99.5	101	98.2			1.09
	Thallium	95.9		93.7	98.1	95.1			4.62
EPA 300.0 Rev. 2.1	Chloride	101		100	98.0			0.277	
	Sulfate	100		101	97.3			0.776	
EPA 350.1 Rev. 2.0	Ammonia-N	102		103	102				0.323
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.2		105	107				2.29
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100		98.9	98.9				0.0
EPA 365.1 Rev. 2.0	Total-P	107		109	108				0.744
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.1		98.4	97.0				1.43
EPA 8270E	Acetochlor	82.7	83.1	82.9	81.7		0.506		1.51
	Alachlor	75.4	77.5	73.1	70.4		2.80		3.78
	Ametryn	91.9	88.0	74.8	78.1		4.33		4.28
	Atrazine	91.1	89.0	96.5	94.6		2.31		1.78
	Atrazine Desethyl	73.4	78.4	80.8	78.4		6.70		2.91
	Azinphos Methyl	80.3	82.7	89.0	79.0		3.03		11.9
	Azoxystrobin	153	170				10.6		11.1
	Bromacil	67.2	73.9				9.61		11.9
	Butylate	56.8	55.0	52.1	59.1		3.17		12.5
	Caffeine	81.5	81.1	45.3	86.8		0.385		62.7
	Carbophenothion	69.0	74.1	71.7	68.7		7.09		4.30
	Carfentrazone Ethyl	75.8	78.4	75.6	67.5		3.43		11.4
	Chlorpyrifos Ethyl	72.4	73.7	76.3	73.9		1.73		3.13
	Chlorpyrifos Methyl	84.0	89.7	89.0	85.8		6.54		3.70
	Cyanazine	97.1	94.7	87.5	88.8		2.52		1.52
	Demeton	75.0	78.2	82.4	86.7		4.11		5.06
	Diazinon	85.1	85.2	87.7	86.4		0.201		1.49
	Difenoconazole	142	134				5.29		2.46
	Dimethenamid	78.1	77.1	80.6	76.0		1.31		5.92
	Disulfoton	69.1	75.8	75.6	74.0		9.21		2.06
	Dithiopyr	68.1	65.8	71.9	66.5		3.44		7.87
	EPTC	52.7	52.0	49.3	53.7		1.31		8.45
	Ethion	72.3	69.0	46.3	37.2		4.70		21.7
	Ethoprop	81.3	82.0	97.0	96.8		0.813		0.285
	Fenamiphos	78.1	82.9	65.4	78.5		5.91		18.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fenbuconazole	98.8	95.2	101	90.3	3.76		11.2
	Fipronil	84.8	83.4	86.9	81.8	1.67		6.06
	Fipronil Desulfinyl	78.1	80.1	78.6	75.4	2.57		4.23
	Fipronil Sulfide	75.3	76.3	71.1	72.9	1.34		2.48
	Fipronil Sulfone	62.7	65.3	69.4	71.0	4.04		2.35
	Fluazifop-P-butyl	68.8	72.4	75.6	73.3	5.10		3.08
	Fludioxonil	70.2	69.2			1.50		2.54
	Flumioxazin	196	175	196	185	11.4		5.55
	Flutolanil	79.6	78.8	70.6	66.0	1.12		6.00
	Fluxapyroxad	69.8	65.9	56.1	49.6	5.77		12.3
	Fonofos	74.5	76.6	77.8	74.8	2.69		3.99
	Hexazinone	77.1	76.4	88.5	82.3	0.887		7.30
	Imazalil	66.5	73.4	68.0	63.0	9.76		7.68
	Iprodione	72.8	74.8			2.71		1.75
	Malathion	98.1	100	101	99.4	2.00		1.24
	Metalaxyl	70.9	71.9			1.40		0.0370
	Metolachlor	75.0	75.0	73.6	71.0	0.0136		3.30
	Metribuzin	89.3	92.4	98.6	98.5	3.41		0.0904
	Mevinphos	74.6	73.7	92.1	91.8	1.28		0.397
	Molinate	63.6	62.6	66.1	67.5	1.53		2.08
	Myclobutanil	74.4	74.6	74.0	68.8	0.325		7.25
	Naled	55.5	55.1	52.1	53.1	0.805		1.80
	Norflurazon	66.5	69.2			3.95		10.8
	Oxadiazon	67.8	68.1	69.4	68.6	0.357		1.20
	Oxyfluorfen	82.4	79.2	86.2	84.3	4.02		2.21
	Parathion Ethyl	77.6	77.0	85.8	84.0	0.723		2.13
	Parathion Methyl	99.1	98.9	113	109	0.136		3.82
	Pendimethalin	67.7	67.9	80.2	78.8	0.327		1.77
	Phorate	79.3	111	88.3	88.0	33.4		0.328
	Prodiamine	41.8	50.2	53.1	50.8	18.2		4.31
	Prometon	76.0	76.9	72.1	69.5	1.24		3.69
	Prometryn	82.9	82.4	85.7	82.9	0.630		3.28
	Pronamide	88.2	86.8	88.1	91.5	1.58		3.79
	Propiconazole	71.4	73.0			2.21		9.80
	Pyriproxyfen	72.1	73.0	67.7	64.6	1.35		4.79
	Simazine	84.7	88.3	101	97.5	4.23		3.45
	Sulfentrazone	59.0	59.6	69.4	67.3	0.867		2.04
	Tebuconazole	28.1	26.8	27.6	17.7	4.89		43.5
	Terbufos	78.2	77.5	88.5	87.6	0.981		1.06
	Terbutylazine	82.1	82.8	85.4	82.9	0.790		2.93
EPA 8321B	2,4-D	105		79.3	87.2			9.44
	Acesulfame K	118		109	126			13.7
	Acetaminophen	91.0		107	108			0.594
	Acetamiprid	91.7		98.5	94.0			4.67
	Afidopyropen	62.5		74.0	80.1			7.92
	AMPA	96.6		141	148			5.09
	Bentazon	90.7		44.0	41.8			2.35
	Benzovindiflupyr	75.6		72.0	77.3			7.09
	Carbamazepine	98.7		74.2	77.7			4.12
	Clothianidin	99.0		88.7	97.4			9.36
	Dinotefuran	83.9		103	96.4			5.19
	Diuron	62.7		51.0	51.7			1.41
	Endothall	104		84.8	102			18.2
	Fenuron	95.6		70.3	67.8			3.56

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Fluridone	87.5	95.6	59.7			24.4
	Glufosinate	108	96.4	112			14.8
	Glyphosate	105	82.1	86.1			4.22
	Hydrocodone	94.0	87.7	87.8			0.0536
	Ibuprofen	86.1	67.4	76.8			13.1
	Imazapyr	98.0	101	91.1			7.94
	Imidacloprid	99.7	123	130			4.72
	Linuron	69.5	62.5	64.1			2.50
	Mandestrobin	81.1	77.6	80.4			3.59
	MCPP	102	78.3	82.7			5.47
	Naproxen	46.8	76.3	74.4			2.55
	Primidone	90.7	86.9	97.9			11.9
	Pyraclostrobin	74.3	80.2	78.0			2.84
	Sucralose	108	111	113			1.65
	Thiamethoxam	86.2	111	110			0.649
	Tolfenpyrad	36.9	42.3	45.9			8.21
	Triclopyr	90.0	75.1	83.5			10.6
SM 2120 B-2011	Color (true)	97.7				0.669	
SM 2320 B-2011	Total Alkalinity	101				1.65	
SM 2540 C-2011	TDS					3.90	
SM 4500 F-C-2011	Fluoride	97.6	98.0	96.5			0.953
SM 5310 B-2011	Organic Carbon	97.6	97.8	97.6			0.211

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2223669
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2223675
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2223675
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2223669
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2223669
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2223670
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2223670
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2223670
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2223670
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2223671
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2223676
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2223674
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2223674
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2223669
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2223669
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2223675
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2223669
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2223669
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2223669
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2223670

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	02/05/2021			02/05/2021 16:02	Blanca Fach	2223669
EPA 200.7 Rev. 4.4	02/05/2021	02/08/2021 16:30	Elliott D. Healy	02/09/2021 16:11	Betina Topolski	2223675
EPA 200.8 Rev. 5.4	02/05/2021	02/08/2021 16:30	Elliott D. Healy	02/16/2021 15:37	Alexander Thompson	2223675
	02/05/2021	02/08/2021 16:30	Elliott D. Healy	02/17/2021 16:05	Alexander Thompson	2223675
EPA 300.0 Rev. 2.1	02/05/2021			02/09/2021 20:31	Lipi Saha	2223669
EPA 350.1 Rev. 2.0	02/05/2021			02/10/2021 18:22	Ping Hua	2223670
EPA 351.2 Rev. 2.0	02/05/2021	02/12/2021 12:30	Yen Ta	02/15/2021 15:55	Julia Storbeck	2223670
EPA 353.2 Rev. 2.0	02/05/2021			02/09/2021 09:38	Beverly Y. Sanders	2223670
EPA 365.1 Rev. 2.0	02/05/2021	02/10/2021 17:47	Madeline Gruver	02/11/2021 15:29	Shengyu Wang	2223670
EPA 365.1 Rev. 2.0 dissolved	02/05/2021			02/05/2021 15:12	Virginia P. Brown	2223671
EPA 8270E	02/05/2021	02/11/2021 08:00	Fe-Val Siddell	02/12/2021 16:01	Vandana T. Nagar	2223676
EPA 8321B	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/08/2021 12:44	Rebecca Ware	2223674
	02/05/2021	02/08/2021 11:15	Rebecca Ware	02/10/2021 04:27	Rebecca Ware	2223674
	02/05/2021	02/09/2021 13:00	Hoor Shaik	02/12/2021 01:07	Juyoung Kim	2223674
SM 2120 B-2011	02/05/2021			02/05/2021 17:17	Madeline Gruver	2223669
SM 2320 B-2011	02/05/2021			02/09/2021 14:10	Dale L. Simmons	2223669
SM 2340B	02/05/2021			02/09/2021 16:11	Betina Topolski	2223675
SM 2540 C-2011	02/05/2021			02/10/2021 14:52	Yijie Li	2223669
SM 2540 D-2011	02/05/2021			02/10/2021 14:52	Yijie Li	2223669
SM 4500 F-C-2011	02/05/2021			02/09/2021 14:10	Dale L. Simmons	2223669
SM 5310 B-2011	02/05/2021			02/09/2021 07:10	Madeline Gruver	2223670