

Chemical Analysis Report

SE-DIST-2021-10-27-01

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

Event Description: **SMP-SCI Tiger**
Request ID: **RQ-2021-10-25-67**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Drew Liddick

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 19-NOV-2021 10:20

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Tiger Creek West of Walk-In-Water Rd

Collection Date/Time: 10/26/2021 13:30

Field ID: G4SE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2286184	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P405687	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P406037	
		Sulfate	21		mg SO4/L	P406040	
	SM 2120 B-2011	Color (true)	100	A	PCU	P405684	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P405794	
	SM 2540 C-2011	TDS	113	A	mg/L	P406284	
	SM 2540 D-2011	TSS	3	IA	mg/L	P406278	
	SM 4500 F-C-2011	Fluoride	0.047	I	mg F/L	P405796	
2286185	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P405860	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P406006	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P405756	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P405911	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P405788	
2286186	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P405678	
2286192	EPA 8321B	2,4-D	0.0020	U	ug/L	P405750	
		Acesulfame K	0.10	U	ug/L	P405602	
		2,4,5-T	0.0040	U	ug/L	P405750	
		AMPA	0.10	U	ug/L	P405602	
		Acetaminophen	0.0080	U	ug/L	P405750	
		Acetamiprid	0.0020	U	ug/L	P405750	
		Endothall	0.25	U	ug/L	P405602	
		Glufosinate	0.10	U	ug/L	P405602	
		Glyphosate	0.10	U	ug/L	P405602	
		Afidopyrophen	0.0020	U	ug/L	P405750	
		Bentazon	8.0E-04	U	ug/L	P405750	
		Sucralose	0.040	I	ug/L	P405602	
		Benzovindiflupyr	0.0020	U	ug/L	P405750	
		Carbamazepine	8.0E-04	U	ug/L	P405750	
		Clothianidin	0.0020	U	ug/L	P405750	
		Dinotefuran	0.0020	U	ug/L	P405750	
		Diuron	0.0020	U	ug/L	P405750	
		Fenuron	0.016	U	ug/L	P405750	
		Fluridone	8.0E-04	U	ug/L	P405750	
		Imazapyr	0.0040	U	ug/L	P405750	
		Hydrocodone	0.0020	U	ug/L	P405750	
		Ibuprofen	0.020	U	ug/L	P405750	
		Imidacloprid	0.013		ug/L	P405750	MS
		Linuron	0.0040	U	ug/L	P405750	
		Mandestrobin	0.0020	U	ug/L	P405750	
		MCP	0.0040	U	ug/L	P405750	
		Naproxen	0.0080	U	ug/L	P405750	MS
		Primidone	0.0040	U	ug/L	P405750	
		Pyraclostrobin	0.0020	U	ug/L	P405750	

Field ID: G4SE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2286192	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P405750	
		Tolfenpyrad	0.0020	U	ug/L	P405750	
		Triclopyr	0.0040	U	ug/L	P405750	
2286195	EPA 200.7 Rev. 4.4	Barium	14.7		ug/L	P405731	
		Calcium	12.5		mg/L	P405731	
		Iron	110	I	ug/L	P405731	
		Magnesium	6.50		mg/L	P405731	
		Potassium	7.1		mg/L	P405731	
		Sodium	5.4		mg/L	P405731	
		Zinc	5.0	U	ug/L	P405731	
	EPA 200.8 Rev. 5.4	Aluminum	70		ug/L	P405731	
		Antimony	0.050	U	ug/L	P405731	
		Arsenic	0.17	I	ug/L	P405731	
		Boron**	30.4		ug/L	P405731	
		Cadmium	0.020	U	ug/L	P405731	
		Chromium	0.40	U	ug/L	P405731	
		Copper	0.40	U	ug/L	P405731	
		Lead	0.20	U	ug/L	P405731	
		Nickel	0.50	U	ug/L	P405731	
		Selenium	0.20	U	ug/L	P405731	
		Silver	0.010	U	ug/L	P405731	
		Thallium	0.10	U	ug/L	P405731	
		Hardness	58.0		mg/L	P405731	
2286196	SM 2340B						
	EPA 8270E	Acetochlor	0.25	U	ng/L	P405832	
		Alachlor	0.25	U	ng/L	P405832	
		Ametryn	0.61	U	ng/L	P405832	
		Atrazine	0.44	I	ng/L	P405832	
		Atrazine Desethyl	1.5	UJ	ng/L	P405832	LCS, RPD
		Azinphos Methyl	2.0	UJ	ng/L	P405832	LCS, MS, RPD
		Azoxystrobin**	0.51	U	ng/L	P405832	
		Bromacil	11		ng/L	P405832	
		Butylate	0.40	U	ng/L	P405832	
		Caffeine**	50		ng/L	P405832	
		Carbophenothion	0.51	U	ng/L	P405832	
		Carfentrazone Ethyl**	0.10	U	ng/L	P405832	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P405832	
		Chlorpyrifos Methyl	0.051	U	ng/L	P405832	
		Cyanazine	3.3	U	ng/L	P405832	
		Demeton	1.5	U	ng/L	P405832	
		Diazinon	0.13	U	ng/L	P405832	
		Difenoconazole**	0.61	U	ng/L	P405832	
		Dimethenamid**	0.10	U	ng/L	P405832	
		Disulfoton	0.51	U	ng/L	P405832	
		Dithiopyr**	0.18	U	ng/L	P405832	

Field ID: G4SE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2286196	EPA 8270E	EPTC	1.3	U	ng/L	P405832	
		Ethion	0.15	U	ng/L	P405832	
		Ethoprop	0.10	U	ng/L	P405832	
		Fenamiphos	0.51	U	ng/L	P405832	
		Fenbuconazole**	0.13	UJ	ng/L	P405832	LCS, RPD
		Fipronil	0.25	U	ng/L	P405832	
		Fipronil Desulfinyll**	0.13	U	ng/L	P405832	
		Fipronil Sulfide	0.15	U	ng/L	P405832	
		Fipronil Sulfone	0.15	U	ng/L	P405832	
		Fluazifop-P-butyl**	0.10	U	ng/L	P405832	
		Fludioxonil**	0.13	U	ng/L	P405832	
		Flumioxazin**	1.8	U	ng/L	P405832	
		Flutolanil**	0.10	U	ng/L	P405832	
		Fluxapyroxad**	0.10	UJ	ng/L	P405832	LCS, RPD
		Fonofos	0.20	U	ng/L	P405832	
		Hexazinone	0.51	U	ng/L	P405832	
		Imazalil**	0.76	U	ng/L	P405832	
		Iprodione**	0.61	UJ	ng/L	P405832	LCS, RPD
		Malathion	0.35	U	ng/L	P405832	
		Metalaxyl	10		ng/L	P405832	
		Metolachlor	0.35	U	ng/L	P405832	
		Metribuzin	3.3	U	ng/L	P405832	
		Mevinphos	1.1	U	ng/L	P405832	
		Molinate	0.30	U	ng/L	P405832	
		Myclobutanil**	0.25	U	ng/L	P405832	
		Naled**	1.5	UJ	ng/L	P405832	LCS
		Norflurazon	670		ng/L	P405832	
		Oxadiazon	0.30	UJ	ng/L	P405832	LCS, RPD
		Oxyfluorfen**	0.15	U	ng/L	P405832	
		Parathion Ethyl	0.25	U	ng/L	P405832	
		Parathion Methyl	0.56	U	ng/L	P405832	
		Pendimethalin	1.0	U	ng/L	P405832	
		Phorate	0.53	U	ng/L	P405832	
		Prodiamine**	0.18	U	ng/L	P405832	
		Prometon	0.91	U	ng/L	P405832	
		Prometryn	0.20	U	ng/L	P405832	
		Pronamide**	0.15	U	ng/L	P405832	
		Propiconazole**	0.51	U	ng/L	P405832	
		Pyriproxyfen**	0.13	UJ	ng/L	P405832	LCS, RPD
		Simazine	0.51	U	ng/L	P405832	
		Sulfentrazone**	0.51	UJ	ng/L	P405832	LCS, MS, RPD
		Tebuconazole**	0.51	UJ	ng/L	P405832	RPD
		Terbufos	0.10	U	ng/L	P405832	
		Terbuthylazine	0.43	U	ng/L	P405832	

Field ID: G4SE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: 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 8270E: MS accuracy for multiple 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: P405687

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P405731

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P405731

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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: P406037

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406040

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405860

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: P406006

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P405756

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P405911

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P405678

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

Reference Method: EPA 8270E

Batch ID: P405832

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P405832

Component	Result	Code	Units
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfanyl	0.12	U	ng/L
Fipronil Desulfanyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P405832

Component	Result	Code	Units
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P405602

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: EPA 8321B

Batch ID: P405750

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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	0.0040	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: P405684

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P405794

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P406284

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P406278

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P405788

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: P405731

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	106		P	85 - 115
Iron	104		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	102		P	85 - 115
Sodium	104		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P405731

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.8		P	80 - 120
Antimony	100		P	80 - 120
Arsenic	98.0		P	80 - 120
Boron	96.5		P	80 - 120
Cadmium	96.2		P	80 - 120
Chromium	94.7		P	80 - 120
Copper	96.9		P	80 - 120
Lead	96.9		P	80 - 120
Nickel	97.3		P	80 - 120
Selenium	97.5		P	80 - 120
Silver	98.4		P	80 - 120
Thallium	98.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406037

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406040

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405860

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: P406006

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P405756

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: P405911

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P405678

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

Reference Method: EPA 8270E

Batch ID: P405832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.1	80.5	P/P	70 - 121
Alachlor	79.4	76.0	P/P	70 - 119
Ametryn	77.2	78.4	P/P	61 - 135
Atrazine	82.2	91.1	P/P	76 - 123
Atrazine Desethyl	26.0	63.7	F/P	35 - 140
Azinphos Methyl	47.8	119	F/P	57 - 163
Azoxystrobin	82.4	84.9	P/P	43 - 231
Bromacil	58.7	68.7	P/P	42 - 123
Butylate	65.9	64.7	P/P	34 - 92.0
Caffeine	90.1	99.7	P/P	70 - 130
Carbophenothion	86.8	96.6	P/P	61 - 121
Carfentrazone Ethyl	67.6	73.9	P/P	62 - 139
Chlorpyrifos Ethyl	68.9	81.2	P/P	67 - 121
Chlorpyrifos Methyl	103	105	P/P	67 - 120
Cyanazine	70.9	85.1	P/P	20 - 226
Demeton	87.0	83.8	P/P	35 - 125
Diazinon	82.4	84.3	P/P	70 - 122
Difenoconazole	78.1	73.2	P/P	56 - 186
Dimethenamid	73.3	88.7	P/P	67 - 119
Disulfoton	93.7	98.9	P/P	47 - 120
Dithiopyr	72.0	73.0	P/P	67 - 118
EPTC	64.1	61.4	P/P	33 - 90.0
Ethion	74.4	89.9	P/P	40 - 133
Ethoprop	94.5	93.6	P/P	61 - 121
Fenamiphos	100	106	P/P	31 - 139
Fenbuconazole	65.6	104	F/P	66 - 141
Fipronil	76.8	80.0	P/P	62 - 129
Fipronil Desulfinyl	80.5	80.8	P/P	59 - 126
Fipronil Sulfide	88.4	95.8	P/P	63 - 117
Fipronil Sulfone	83.8	92.5	P/P	57 - 117
Fluazifop-P-butyl	63.5	70.9	P/P	63 - 124
Fludioxonil	69.7	73.0	P/P	63 - 123
Flumioxazin	108	132	P/P	34 - 245
Flutolanil	56.8	60.0	P/P	56 - 131

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P405832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	47.8	102	F/P	57 - 117
Fonofos	90.8	90.9	P/P	61 - 116
Hexazinone	89.8	98.4	P/P	55 - 138
Imazalil	83.7	79.9	P/P	33 - 143
Iprodione	54.4	105	F/P	59 - 118
Malathion	84.7	98.5	P/P	62 - 138
Metalaxyl	71.7	72.6	P/P	24 - 147
Metolachlor	84.7	80.1	P/P	68 - 118
Metribuzin	88.5	96.4	P/P	20 - 239
Mevinphos	82.1	96.1	P/P	46 - 124
Molinate	73.6	71.9	P/P	46 - 100
Myclobutanil	65.9	69.9	P/P	32 - 149
Naled	27.9	26.0	F/F	32 - 95.0
Norflurazon	88.9	104	P/P	57 - 127
Oxadiazon	56.2	88.0	F/P	63 - 118
Oxyfluorfen	80.8	85.9	P/P	69 - 137
Parathion Ethyl	81.6	98.7	P/P	70 - 113
Parathion Methyl	116	118	P/P	71 - 130
Pendimethalin	96.7	88.3	P/P	55 - 118
Phorate	79.0	94.8	P/P	46 - 125
Prodiamine	124	115	P/P	20 - 141
Prometon	70.4	72.2	P/P	54 - 122
Prometryn	72.3	68.4	P/P	66 - 124
Pronamide	80.4	81.7	P/P	79 - 122
Propiconazole	102	98.2	P/P	61 - 126
Pyriproxyfen	30.0	83.6	F/P	52 - 131
Simazine	75.6	84.0	P/P	75 - 128
Sulfentrazone	105	142	P/F	20 - 132
Tebuconazole	44.0	73.4	P/P	20 - 116
Terbufos	114	108	P/P	61 - 117
Terbutylazine	76.7	80.9	P/P	74 - 116

Reference Method: EPA 8321B
Batch ID: P405602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	95.8		P	40 - 160
Endothall	82.9		P	40 - 150
Glufosinate	97.0		P	40 - 160
Glyphosate	95.6		P	40 - 160
Sucralose	94.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P405750

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.0		P	40 - 150
2,4,5-T	89.5		P	40 - 150
Acetaminophen	82.9		P	30 - 150
Acetamiprid	84.3		P	40 - 150
Afidopyropen	68.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P405750

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	88.0		P	30 - 150
Benzovindiflupyr	75.5		P	40 - 150
Carbamazepine	86.1		P	40 - 150
Clothianidin	88.8		P	40 - 150
Dinotefuran	74.6		P	40 - 150
Diuron	80.2		P	40 - 150
Fenuron	83.2		P	40 - 150
Fluridone	89.9		P	40 - 150
Hydrocodone	78.1		P	40 - 150
Ibuprofen	79.0		P	40 - 150
Imazapyr	92.9		P	40 - 150
Imidacloprid	80.8		P	40 - 150
Linuron	69.4		P	40 - 150
Mandestrobin	77.1		P	40 - 150
MCPP	88.2		P	40 - 150
Naproxen	95.5		P	40 - 150
Primidone	81.7		P	40 - 150
Pyraclostrobin	77.9		P	40 - 150
Thiamethoxam	81.6		P	40 - 150
Tolfenpyrad	50.2		P	30 - 150
Triclopyr	90.1		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P405684

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.3		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P405794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

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

Reference Method: SM 5310 B-2011
Batch ID: P405788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P405731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285813	Barium	104		P	80 - 120
2285813	Calcium	106		P	80 - 120
2285813	Iron	106		P	80 - 120
2285813	Magnesium	109		P	80 - 120
2285813	Potassium	108		P	80 - 120
2285813	Sodium	102		P	80 - 120
2285813	Zinc	105		P	80 - 120
2286487	Barium	104	103	P/P	80 - 120
2286487	Calcium	105	107	P/P	80 - 120
2286487	Iron	110	111	P/P	80 - 120
2286487	Magnesium	112	114	P/P	80 - 120
2286487	Potassium	99.2	101	P/P	80 - 120
2286487	Sodium	102	102	P/P	80 - 120
2286487	Zinc	113	111	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P405731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285813	Aluminum	101		P	80 - 120
2285813	Antimony	102		P	80 - 120
2285813	Arsenic	97.8		P	80 - 120
2285813	Boron	101		P	80 - 120
2285813	Cadmium	97.2		P	80 - 120
2285813	Chromium	95.5		P	80 - 120
2285813	Copper	97.8		P	80 - 120
2285813	Lead	100		P	80 - 120
2285813	Nickel	96.2		P	80 - 120
2285813	Selenium	95.9		P	80 - 120
2285813	Silver	101		P	80 - 120
2285813	Thallium	102		P	80 - 120
2286487	Aluminum	100	102	P/P	80 - 120
2286487	Antimony	102	102	P/P	80 - 120
2286487	Arsenic	98.3	99.1	P/P	80 - 120
2286487	Boron	99.4	101	P/P	80 - 120
2286487	Cadmium	98.6	99.8	P/P	80 - 120
2286487	Chromium	96.1	95.7	P/P	80 - 120
2286487	Copper	98.3	98.8	P/P	80 - 120
2286487	Lead	98.7	98.7	P/P	80 - 120
2286487	Nickel	97.4	97.0	P/P	80 - 120
2286487	Selenium	97.6	97.6	P/P	80 - 120
2286487	Silver	99.0	99.1	P/P	80 - 120
2286487	Thallium	99.5	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285877	Chloride	98.9		P	90 - 110
2286184	Chloride	97.5		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285877	Sulfate	101		P	90 - 110
2286184	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P405860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286252	Ammonia-N	96.8	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P406006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286252	Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P405756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286104	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P405911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286654	Total-P	108	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P405678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286254	O-Phosphate-P	96.4	96.0	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P405832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286196	Acetochlor	81.7	76.1	P/P	66 - 122
2286196	Alachlor	84.1	77.4	P/P	65 - 122
2286196	Ametryn	76.3	70.2	P/P	45 - 173
2286196	Atrazine	90.6	83.2	P/P	70 - 134
2286196	Atrazine Desethyl	45.8	38.5	P/P	25 - 150
2286196	Azinphos Methyl	239	292	F/F	44 - 174
2286196	Azoxystrobin	88.8	82.7	P/P	10 - 268
2286196	Butylate	58.3	53.0	P/P	15 - 97.0
2286196	Carbophenothion	99.6	93.4	P/P	42 - 129
2286196	Carfentrazone Ethyl	72.5	68.8	P/P	62 - 145
2286196	Chlorpyrifos Ethyl	100	91.9	P/P	60 - 124
2286196	Chlorpyrifos Methyl	108	103	P/P	66 - 119
2286196	Cyanazine	86.6	76.5	P/P	17 - 225
2286196	Demeton	95.3	89.2	P/P	36 - 142
2286196	Diazinon	83.8	82.4	P/P	70 - 128

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P405832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286196	Difenoconazole	73.0	68.6	P/P	33 - 222
2286196	Dimethenamid	67.5	63.5	P/P	54 - 125
2286196	Disulfoton	99.8	98.8	P/P	49 - 133
2286196	Dithiopyr	75.1	70.8	P/P	55 - 123
2286196	EPTC	56.0	55.4	P/P	19 - 91.0
2286196	Ethion	98.0	85.2	P/P	13 - 143
2286196	Ethoprop	95.4	93.5	P/P	49 - 144
2286196	Fenamiphos	98.4	97.5	P/P	32 - 136
2286196	Fenbuconazole	109	113	P/P	73 - 148
2286196	Fipronil	81.4	75.5	P/P	57 - 129
2286196	Fipronil Desulfinyl	79.9	75.0	P/P	49 - 127
2286196	Fipronil Sulfide	94.9	92.6	P/P	44 - 127
2286196	Fipronil Sulfone	93.0	87.0	P/P	35 - 126
2286196	Fluazifop-P-butyl	103	99.5	P/P	67 - 129
2286196	Fludioxonil	73.7	67.5	P/P	61 - 126
2286196	Flumioxazin	137	131	P/P	38 - 279
2286196	Flutolanil	56.6	56.0	P/P	55 - 136
2286196	Fluxapyroxad	90.8	87.3	P/P	33 - 140
2286196	Fonofos	93.7	90.3	P/P	58 - 125
2286196	Hexazinone	102	97.8	P/P	57 - 148
2286196	Imazalil	72.6	67.4	P/P	10 - 221
2286196	Iprodione	96.7	90.9	P/P	32 - 140
2286196	Malathion	137	132	P/P	52 - 138
2286196	Metalaxyl	91.3	91.2	P/P	46 - 134
2286196	Metolachlor	77.8	75.1	P/P	58 - 122
2286196	Metribuzin	95.2	92.1	P/P	16 - 272
2286196	Mevinphos	105	91.7	P/P	45 - 140
2286196	Molinate	71.6	69.1	P/P	41 - 103
2286196	Myclobutanil	66.6	62.7	P/P	60 - 134
2286196	Naled	30.3	28.3	P/P	20 - 113
2286196	Oxadiazon	63.3	58.3	P/P	44 - 125
2286196	Oxyfluorfen	93.9	87.6	P/P	66 - 176
2286196	Parathion Ethyl	93.0	89.3	P/P	57 - 132
2286196	Parathion Methyl	118	110	P/P	59 - 156
2286196	Pendimethalin	103	100	P/P	59 - 129
2286196	Phorate	105	97.3	P/P	47 - 136
2286196	Prodiamine	140	133	P/P	10 - 159
2286196	Prometon	76.7	72.2	P/P	59 - 127
2286196	Prometryn	73.5	67.3	P/P	59 - 129
2286196	Pronamide	84.1	78.0	P/P	65 - 145
2286196	Propiconazole	95.8	91.4	P/P	28 - 165
2286196	Pyriproxyfen	34.1	33.9	P/P	21 - 180
2286196	Simazine	85.6	80.3	P/P	63 - 147
2286196	Sulfentrazone	155	135	F/P	32 - 136
2286196	Tebuconazole	70.1	67.5	P/P	10 - 117
2286196	Terbufos	117	114	P/P	61 - 131
2286196	Terbutylazine	82.0	77.3	P/P	62 - 126

Reference Method: EPA 8321B
Batch ID: P405602

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

Reference Method: EPA 8321B
Batch ID: P405602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285918	Acesulfame K	150	142	P/P	40 - 150
2285918	AMPA	61.8	60.3	P/P	40 - 160
2285918	Endothall	96.3	89.5	P/P	40 - 150
2285918	Glufosinate	64.7	65.4	P/P	40 - 160
2285918	Glyphosate	106	107	P/P	40 - 160
2285918	Sucralose	94.5	96.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P405750

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286692	2,4-D	110	95.7	P/P	40 - 150
2286692	2,4,5-T	109	113	P/P	40 - 150
2286692	Acetaminophen	115	102	P/P	30 - 150
2286692	Acetamiprid	84.1	85.6	P/P	40 - 150
2286692	Afidopyropen	79.4	74.3	P/P	40 - 150
2286692	Bentazon	58.9	62.3	P/P	30 - 150
2286692	Benzovindiflupyr	95.1	89.9	P/P	40 - 150
2286692	Carbamazepine	106	102	P/P	40 - 150
2286692	Clothianidin	124	103	P/P	40 - 150
2286692	Dinotefuran	131	115	P/P	40 - 150
2286692	Diuron	85.1	80.1	P/P	40 - 150
2286692	Fenuron	93.8	92.4	P/P	40 - 150
2286692	Fluridone	106	97.7	P/P	40 - 150
2286692	Hydrocodone	107	97.8	P/P	40 - 150
2286692	Ibuprofen	89.6	90.7	P/P	40 - 150
2286692	Imazapyr	135	93.1	P/P	40 - 150
2286692	Imidacloprid	166	160	F/F	40 - 150
2286692	Linuron	80.9	82.1	P/P	40 - 150
2286692	Mandestrobin	95.0	94.6	P/P	40 - 150
2286692	MCPP	110	114	P/P	40 - 150
2286692	Naproxen	156	121	F/P	40 - 150
2286692	Primidone	99.3	98.8	P/P	40 - 150
2286692	Pyraclostrobin	91.2	86.4	P/P	40 - 150
2286692	Thiamethoxam	126	146	P/P	40 - 150
2286692	Tolfenpyrad	57.4	53.8	P/P	30 - 150
2286692	Triclopyr	107	110	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286264	Fluoride	98.7	98.7	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P405788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285664	Organic Carbon	99.2	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P405687

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286189	Turbidity	1.85	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P405731

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286487	Barium	0.960	Spike	P	0 - 20
2286487	Calcium	1.42	Spike	P	0 - 20
2286487	Iron	1.58	Spike	P	0 - 20
2286487	Magnesium	1.50	Spike	P	0 - 20
2286487	Potassium	1.02	Spike	P	0 - 20
2286487	Sodium	0.359	Spike	P	0 - 20
2286487	Zinc	2.06	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P405731

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286487	Aluminum	1.87	Spike	P	0 - 20
2286487	Antimony	0.454	Spike	P	0 - 20
2286487	Arsenic	0.832	Spike	P	0 - 20
2286487	Boron	1.65	Spike	P	0 - 20
2286487	Cadmium	1.17	Spike	P	0 - 20
2286487	Chromium	0.408	Spike	P	0 - 20
2286487	Copper	0.522	Spike	P	0 - 20
2286487	Lead	0.0542	Spike	P	0 - 20
2286487	Nickel	0.321	Spike	P	0 - 20
2286487	Selenium	0.0669	Spike	P	0 - 20
2286487	Silver	0.110	Spike	P	0 - 20
2286487	Thallium	1.62	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P406037

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285877	Chloride	0.751	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P405860

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286252	Ammonia-N	0.748	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P406006

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286252	Kjeldahl Nitrogen	0.202	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P405756

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286104	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P405911

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286654	Total-P	0.781	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P405678

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286254	O-Phosphate-P	0.416	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P405832

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286196	Acetochlor	7.08	Spike	P	0 - 30
2286196	Alachlor	8.31	Spike	P	0 - 30
2286196	Ametryn	8.34	Spike	P	0 - 30
2286196	Atrazine	7.51	Spike	P	0 - 30
2286196	Atrazine Desethyl	17.3	Spike	P	0 - 30
2286196	Azinphos Methyl	19.8	Spike	P	0 - 30
2286196	Azoxystrobin	7.11	Spike	P	0 - 30
2286196	Bromacil	5.57	Spike	P	0 - 30
2286196	Butylate	9.47	Spike	P	0 - 30
2286196	Caffeine	1.71	Spike	P	0 - 30
2286196	Carbophenothion	6.36	Spike	P	0 - 30
2286196	Carfentrazone Ethyl	5.26	Spike	P	0 - 30
2286196	Chlorpyrifos Ethyl	8.63	Spike	P	0 - 30
2286196	Chlorpyrifos Methyl	5.51	Spike	P	0 - 30
2286196	Cyanazine	12.5	Spike	P	0 - 30
2286196	Demeton	6.59	Spike	P	0 - 30
2286196	Diazinon	1.65	Spike	P	0 - 30
2286196	Difenoconazole	6.25	Spike	P	0 - 30
2286196	Dimethenamid	6.12	Spike	P	0 - 30
2286196	Disulfoton	0.968	Spike	P	0 - 30
2286196	Dithiopyr	5.94	Spike	P	0 - 30
2286196	EPTC	1.09	Spike	P	0 - 30
2286196	Ethion	14.0	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P405832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286196	Ethoprop	2.06	Spike	P	0 - 30
2286196	Fenamiphos	0.921	Spike	P	0 - 30
2286196	Fenbuconazole	3.44	Spike	P	0 - 30
2286196	Fipronil	7.49	Spike	P	0 - 30
2286196	Fipronil Desulfinyl	6.41	Spike	P	0 - 30
2286196	Fipronil Sulfide	2.39	Spike	P	0 - 30
2286196	Fipronil Sulfone	6.69	Spike	P	0 - 30
2286196	Fluazifop-P-butyl	2.99	Spike	P	0 - 30
2286196	Fludioxonil	8.76	Spike	P	0 - 30
2286196	Flumioxazin	4.61	Spike	P	0 - 30
2286196	Flutolanil	0.981	Spike	P	0 - 30
2286196	Fluxapyroxad	3.94	Spike	P	0 - 30
2286196	Fonofos	3.61	Spike	P	0 - 30
2286196	Hexazinone	4.61	Spike	P	0 - 30
2286196	Imazalil	7.32	Spike	P	0 - 30
2286196	Iprodione	6.18	Spike	P	0 - 30
2286196	Malathion	4.25	Spike	P	0 - 30
2286196	Metalaxyl	0.105	Spike	P	0 - 30
2286196	Metolachlor	3.54	Spike	P	0 - 30
2286196	Metribuzin	3.26	Spike	P	0 - 30
2286196	Mevinphos	13.5	Spike	P	0 - 30
2286196	Molinate	3.42	Spike	P	0 - 30
2286196	Myclobutanil	6.06	Spike	P	0 - 30
2286196	Naled	6.89	Spike	P	0 - 30
2286196	Norflurazon	6.75	Spike	P	0 - 30
2286196	Oxadiazon	8.36	Spike	P	0 - 30
2286196	Oxyfluorfen	6.94	Spike	P	0 - 30
2286196	Parathion Ethyl	4.01	Spike	P	0 - 30
2286196	Parathion Methyl	6.71	Spike	P	0 - 30
2286196	Pendimethalin	2.29	Spike	P	0 - 30
2286196	Phorate	7.20	Spike	P	0 - 30
2286196	Prodiamine	5.34	Spike	P	0 - 30
2286196	Prometon	6.01	Spike	P	0 - 30
2286196	Prometryn	8.80	Spike	P	0 - 30
2286196	Pronamide	7.60	Spike	P	0 - 30
2286196	Propiconazole	4.70	Spike	P	0 - 30
2286196	Pyriproxyfen	0.476	Spike	P	0 - 30
2286196	Simazine	6.34	Spike	P	0 - 30
2286196	Sulfentrazone	13.3	Spike	P	0 - 30
2286196	Tebuconazole	3.84	Spike	P	0 - 30
2286196	Terbufos	2.97	Spike	P	0 - 30
2286196	Terbutylazine	5.93	Spike	P	0 - 30
LFB	Acetochlor	6.73	LCS	P	0 - 30
LFB	Alachlor	4.37	LCS	P	0 - 30
LFB	Ametryn	1.53	LCS	P	0 - 30
LFB	Atrazine	10.3	LCS	P	0 - 30
LFB	Atrazine Desethyl	84.1	LCS	F	0 - 30
LFB	Azinphos Methyl	85.1	LCS	F	0 - 30
LFB	Azoxystrobin	2.97	LCS	P	0 - 30
LFB	Bromacil	15.7	LCS	P	0 - 30
LFB	Butylate	1.75	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P405832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Caffeine	10.1	LCS	P	0 - 30
LFB	Carbophenothion	10.8	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	8.88	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	16.4	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.13	LCS	P	0 - 30
LFB	Cyanazine	18.2	LCS	P	0 - 30
LFB	Demeton	3.80	LCS	P	0 - 30
LFB	Diazinon	2.28	LCS	P	0 - 30
LFB	Difenoconazole	6.49	LCS	P	0 - 30
LFB	Dimethenamid	19.1	LCS	P	0 - 30
LFB	Disulfoton	5.48	LCS	P	0 - 30
LFB	Dithiopyr	1.32	LCS	P	0 - 30
LFB	EPTC	4.21	LCS	P	0 - 30
LFB	Ethion	18.9	LCS	P	0 - 30
LFB	Ethoprop	0.966	LCS	P	0 - 30
LFB	Fenamiphos	5.60	LCS	P	0 - 30
LFB	Fenbuconazole	45.3	LCS	F	0 - 30
LFB	Fipronil	3.98	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.350	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.05	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.83	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	11.0	LCS	P	0 - 30
LFB	Fludioxonil	4.60	LCS	P	0 - 30
LFB	Flumioxazin	19.9	LCS	P	0 - 30
LFB	Flutolanil	5.50	LCS	P	0 - 30
LFB	Fluxapyroxad	72.0	LCS	F	0 - 30
LFB	Fonofos	0.176	LCS	P	0 - 30
LFB	Hexazinone	9.09	LCS	P	0 - 30
LFB	Imazalil	4.66	LCS	P	0 - 30
LFB	Iprodione	63.4	LCS	F	0 - 30
LFB	Malathion	15.0	LCS	P	0 - 30
LFB	Metalaxyl	1.26	LCS	P	0 - 30
LFB	Metolachlor	5.61	LCS	P	0 - 30
LFB	Metribuzin	8.59	LCS	P	0 - 30
LFB	Mevinphos	15.7	LCS	P	0 - 30
LFB	Molinate	2.36	LCS	P	0 - 30
LFB	Myclobutanil	5.87	LCS	P	0 - 30
LFB	Naled	6.98	LCS	P	0 - 30
LFB	Norflurazon	16.2	LCS	P	0 - 30
LFB	Oxadiazon	44.2	LCS	F	0 - 30
LFB	Oxyfluorfen	6.14	LCS	P	0 - 30
LFB	Parathion Ethyl	19.0	LCS	P	0 - 30
LFB	Parathion Methyl	1.50	LCS	P	0 - 30
LFB	Pendimethalin	9.09	LCS	P	0 - 30
LFB	Phorate	18.1	LCS	P	0 - 30
LFB	Prodiamine	7.83	LCS	P	0 - 30
LFB	Prometon	2.44	LCS	P	0 - 30
LFB	Prometryn	5.58	LCS	P	0 - 30
LFB	Pronamide	1.57	LCS	P	0 - 30
LFB	Propiconazole	3.39	LCS	P	0 - 30
LFB	Pyriproxyfen	94.5	LCS	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P405832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Simazine	10.6	LCS	P	0 - 30
LFB	Sulfentrazone	30.2	LCS	F	0 - 30
LFB	Tebuconazole	50.1	LCS	F	0 - 30
LFB	Terbufos	5.18	LCS	P	0 - 30
LFB	Terbuthylazine	5.24	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P405602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285918	Acesulfame K	5.21	Spike	P	0 - 30
2285918	AMPA	2.38	Spike	P	0 - 30
2285918	Endothall	7.33	Spike	P	0 - 30
2285918	Glufosinate	1.06	Spike	P	0 - 30
2285918	Glyphosate	0.379	Spike	P	0 - 30
2285918	Sucralose	1.28	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P405750

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286692	2,4-D	9.82	Spike	P	0 - 30
2286692	2,4,5-T	3.75	Spike	P	0 - 30
2286692	Acetaminophen	12.2	Spike	P	0 - 30
2286692	Acetamiprid	1.74	Spike	P	0 - 30
2286692	Afidopyropen	6.75	Spike	P	0 - 30
2286692	Bentazon	5.56	Spike	P	0 - 30
2286692	Benzovindiflupyr	5.66	Spike	P	0 - 30
2286692	Carbamazepine	3.54	Spike	P	0 - 30
2286692	Clothianidin	9.41	Spike	P	0 - 30
2286692	Dinotefuran	13.2	Spike	P	0 - 30
2286692	Diuron	4.48	Spike	P	0 - 30
2286692	Fenuron	1.47	Spike	P	0 - 30
2286692	Fluridone	8.48	Spike	P	0 - 30
2286692	Hydrocodone	9.38	Spike	P	0 - 30
2286692	Ibuprofen	1.29	Spike	P	0 - 30
2286692	Imazapyr	15.0	Spike	P	0 - 30
2286692	Imidacloprid	1.03	Spike	P	0 - 30
2286692	Linuron	1.49	Spike	P	0 - 30
2286692	Mandestrobin	0.469	Spike	P	0 - 30
2286692	MCP	3.81	Spike	P	0 - 30
2286692	Naproxen	25.1	Spike	P	0 - 30
2286692	Primidone	0.473	Spike	P	0 - 30
2286692	Pyraclostrobin	5.36	Spike	P	0 - 30
2286692	Thiamethoxam	4.21	Spike	P	0 - 30
2286692	Tolfenpyrad	6.37	Spike	P	0 - 30
2286692	Triclopyr	3.04	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P405684

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286184	Color (true)	0.357	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P405794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286264	Total Alkalinity	0.0802	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P406284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286184	TDS	8.85	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286264	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P405788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285664	Organic Carbon	0.338	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2286192
Field Sample ID: G4SE0138

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.7	P	30 - 160
EPA 8321B	Diuron-d6	80.0	P	30 - 160
EPA 8321B	Endothall-d6	77.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	87.3	P	30 - 160
EPA 8321B	Sucralose-d6	74.9	P	30 - 160

Lab Sample ID: 2286196
Field Sample ID: G4SE0138

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	54.9	P	20 - 200
EPA 8270E	Simazine-d10	106	P	73 - 135
EPA 8270E	Terbufos-d10	115	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A108565

Included Lab Sample IDs: 2286186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	97.9	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A108567

Included Lab Sample IDs: 2286184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.1	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A108569

Included Lab Sample IDs: 2286184

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A108614

Included Lab Sample IDs: 2286185

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

Reference Method: EPA 8321B

Run ID: A108618

Included Lab Sample IDs: 2286192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.7	93.8	P/P	60 - 160
Endothall	80.5	76.9	P/P	60 - 160
Sucralose	87.9	94.0	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A108635

Included Lab Sample IDs: 2286185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.9	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A108641

Included Lab Sample IDs: 2286192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	96.0	P/P	60 - 160
Glufosinate	97.9	93.6	P/P	60 - 160
Glyphosate	105	104	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A108642

Included Lab Sample IDs: 2286184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.4	97.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A108642

Included Lab Sample IDs: 2286184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A108662

Included Lab Sample IDs: 2286185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	97.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A108667

Included Lab Sample IDs: 2286195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	98.5	P/P	90 - 110
Calcium	101	102	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	104	105	P/P	90 - 110
Potassium	97.9	96.8	P/P	90 - 110
Sodium	100	99.0	P/P	90 - 110
Zinc	103	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A108673

Included Lab Sample IDs: 2286195

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	99.3	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Arsenic	99.3	98.6	P/P	90 - 110
Boron	97.6	99.6	P/P	90 - 110
Cadmium	98.4	97.3	P/P	90 - 110
Chromium	94.3	93.6	P/P	90 - 110
Copper	97.3	95.5	P/P	90 - 110
Lead	97.9	97.1	P/P	90 - 110
Nickel	97.1	94.9	P/P	90 - 110
Selenium	99.7	98.2	P/P	90 - 110
Silver	101	99.8	P/P	90 - 110
Thallium	99.7	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A108733

Included Lab Sample IDs: 2286184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.9	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A108742

Included Lab Sample IDs: 2286185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A108750

Included Lab Sample IDs: 2286192

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	91.2	P/P	50 - 150
2,4,5-T	101	99.3	P/P	50 - 150
Acetaminophen	91.7	101	P/P	60 - 160
Acetamiprid	102	105	P/P	50 - 150
Afidopyropen	98.4	97.5	P/P	50 - 150
Bentazon	105	107	P/P	50 - 160
Benzovindiflupyr	110	103	P/P	50 - 150
Carbamazepine	100	103	P/P	60 - 150
Clothianidin	109	109	P/P	60 - 150
Dinotefuran	96.5	105	P/P	50 - 150
Diuron	96.9	117	P/P	60 - 160
Fenuron	97.0	98.9	P/P	60 - 150
Fluridone	105	111	P/P	60 - 160
Hydrocodone	96.4	101	P/P	60 - 150
Ibuprofen	127	84.4	P/P	50 - 160
Imazapyr	105	141	P/P	50 - 150
Imidacloprid	96.1	94.5	P/P	60 - 150
Linuron	107	104	P/P	60 - 150
Mandestrobin	104	103	P/P	50 - 150
MCPP	89.6	86.1	P/P	50 - 150
Naproxen	109	113	P/P	50 - 160
Primidone	109	103	P/P	60 - 150
Pyraclostrobin	102	98.7	P/P	60 - 150
Thiamethoxam	96.2	97.1	P/P	50 - 150
Tolfenpyrad	106	106	P/P	60 - 150
Triclopyr	102	102	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108758

Included Lab Sample IDs: 2286185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A108895
Included Lab Sample IDs: 2286196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	99.7		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azoxystrobin	96.7		P	80 - 120
Butylate	96.2		P	80 - 120
Caffeine	101		P	80 - 120
Carbophenothion	112		P	80 - 120
Carfentrazone Ethyl	98.7		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	104		P	80 - 120
Demeton	103		P	80 - 120
Diazinon	103		P	80 - 120
Difenoconazole	105		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	102		P	80 - 120
Dithiopyr	97.6		P	80 - 120
EPTC	103		P	80 - 120
Ethion	106		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	107		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	100		P	80 - 120
Fipronil Sulfide	108		P	80 - 120
Fipronil Sulfone	109		P	80 - 120
Fludioxonil	100		P	80 - 120
Flutolanil	103		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	99.9		P	80 - 120
Imazalil	107		P	80 - 120
Malathion	93.2		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	106		P	80 - 120
Mevinphos	106		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	107		P	80 - 120
Naled	105		P	80 - 120
Oxadiazon	102		P	80 - 120
Oxyfluorfen	106		P	80 - 120
Parathion Ethyl	103		P	80 - 120
Parathion Methyl	97.5		P	80 - 120
Pendimethalin	99.5		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	107		P	80 - 120
Prometon	98.5		P	80 - 120
Prometryn	105		P	80 - 120
Pronamide	94.1		P	80 - 120
Propiconazole	110		P	80 - 120
Pyriproxyfen	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A108895
Included Lab Sample IDs: 2286196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Simazine	107		P	80 - 120
Sulfentrazone	104		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A108898
Included Lab Sample IDs: 2286196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azinphos Methyl	98.6		P	80 - 120
Bromacil	98.8		P	80 - 120
Fenbuconazole	112		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Flumioxazin	102		P	80 - 120
Fluxapyroxad	101		P	80 - 120
Iprodione	104		P	80 - 120
Metalaxyl	104		P	80 - 120
Norflurazon	102		P	80 - 120
Tebuconazole	105		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							1.85	
EPA 200.7 Rev. 4.4	Barium	100		104	104	103			0.960
	Calcium	106		106	105	107			1.42
	Iron	104		106	110	111			1.58
	Magnesium	106		109	112	114			1.50
	Potassium	102		108	99.2	101			1.02
	Sodium	104		102	102	102			0.359
	Zinc	101		105	113	111			2.06
EPA 200.8 Rev. 5.4	Aluminum	98.8		100	102	101			1.87
	Antimony	100		102	102	102			0.454
	Arsenic	98.0		98.3	99.1	97.8			0.832
	Boron	96.5		99.4	101	101			1.65
	Cadmium	96.2		98.6	99.8	97.2			1.17
	Chromium	94.7		96.1	95.7	95.5			0.408
	Copper	96.9		98.3	98.8	97.8			0.522
	Lead	96.9		98.7	98.7	100			0.0542
	Nickel	97.3		97.4	97.0	96.2			0.321
	Selenium	97.5		97.6	97.6	95.9			0.0669
	Silver	98.4		99.0	99.1	101			0.110
	Thallium	98.6		99.5	101	102			1.62
EPA 300.0 Rev. 2.1	Chloride	99.3		98.9	97.5			0.751	
	Sulfate	99.8		101	100				
EPA 350.1 Rev. 2.0	Ammonia-N	95.6		96.8	97.6				0.748
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104		101	100				0.202
EPA 353.2 Rev. 2.0	NO2NO3-N	100		100	99.5				0.501
EPA 365.1 Rev. 2.0	Total-P	106		108	109				0.781
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.3		96.4	96.0				0.416
EPA 8270E	Acetochlor	86.1	80.5	81.7	76.1		6.73		7.08
	Alachlor	79.4	76.0	84.1	77.4		4.37		8.31
	Ametryn	77.2	78.4	76.3	70.2		1.53		8.34
	Atrazine	82.2	91.1	90.6	83.2		10.3		7.51
	Atrazine Desethyl	26.0	63.7	45.8	38.5		84.1		17.3
	Azinphos Methyl	47.8	119	239	292		85.1		19.8
	Azoxystrobin	82.4	84.9	88.8	82.7		2.97		7.11
	Bromacil	58.7	68.7				15.7		5.57
	Butylate	65.9	64.7	58.3	53.0		1.75		9.47
	Caffeine	90.1	99.7				10.1		1.71
	Carbophenothion	86.8	96.6	99.6	93.4		10.8		6.36
	Carfentrazone Ethyl	67.6	73.9	72.5	68.8		8.88		5.26
	Chlorpyrifos Ethyl	68.9	81.2	100	91.9		16.4		8.63
	Chlorpyrifos Methyl	103	105	108	103		2.13		5.51
	Cyanazine	70.9	85.1	86.6	76.5		18.2		12.5
	Demeton	87.0	83.8	95.3	89.2		3.80		6.59
	Diazinon	82.4	84.3	83.8	82.4		2.28		1.65
	Difenoconazole	78.1	73.2	73.0	68.6		6.49		6.25
	Dimethenamid	73.3	88.7	67.5	63.5		19.1		6.12
	Disulfoton	93.7	98.9	99.8	98.8		5.48		0.968
	Dithiopyr	72.0	73.0	75.1	70.8		1.32		5.94
	EPTC	64.1	61.4	56.0	55.4		4.21		1.09
	Ethion	74.4	89.9	98.0	85.2		18.9		14.0
	Ethoprop	94.5	93.6	95.4	93.5		0.966		2.06
	Fenamiphos	100	106	98.4	97.5		5.60		0.921
	Fenbuconazole	65.6	104	109	113		45.3		3.44
	Fipronil	76.8	80.0	81.4	75.5		3.98		7.49

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fipronil Desulfinyl	80.5	80.8	79.9	75.0	0.350		6.41
	Fipronil Sulfide	88.4	95.8	94.9	92.6	8.05		2.39
	Fipronil Sulfone	83.8	92.5	93.0	87.0	9.83		6.69
	Fluazifop-P-butyl	63.5	70.9	103	99.5	11.0		2.99
	Fludioxonil	69.7	73.0	73.7	67.5	4.60		8.76
	Flumioxazin	108	132	137	131	19.9		4.61
	Flutolanil	56.8	60.0	56.6	56.0	5.50		0.981
	Fluxapyroxad	47.8	102	90.8	87.3	72.0		3.94
	Fonofos	90.8	90.9	93.7	90.3	0.176		3.61
	Hexazinone	89.8	98.4	102	97.8	9.09		4.61
	Imazalil	83.7	79.9	72.6	67.4	4.66		7.32
	Iprodione	54.4	105	96.7	90.9	63.4		6.18
	Malathion	84.7	98.5	137	132	15.0		4.25
	Metalaxyl	71.7	72.6	91.3	91.2	1.26		0.105
	Metolachlor	84.7	80.1	77.8	75.1	5.61		3.54
	Metribuzin	88.5	96.4	95.2	92.1	8.59		3.26
	Mevinphos	82.1	96.1	105	91.7	15.7		13.5
	Molinate	73.6	71.9	71.6	69.1	2.36		3.42
	Myclobutanil	65.9	69.9	66.6	62.7	5.87		6.06
	Naled	27.9	26.0	30.3	28.3	6.98		6.89
	Norflurazon	88.9	104			16.2		6.75
	Oxadiazon	56.2	88.0	63.3	58.3	44.2		8.36
	Oxyfluorfen	80.8	85.9	93.9	87.6	6.14		6.94
	Parathion Ethyl	81.6	98.7	93.0	89.3	19.0		4.01
	Parathion Methyl	116	118	118	110	1.50		6.71
	Pendimethalin	96.7	88.3	103	100	9.09		2.29
	Phorate	79.0	94.8	105	97.3	18.1		7.20
	Prodiamine	124	115	140	133	7.83		5.34
	Prometon	70.4	72.2	76.7	72.2	2.44		6.01
	Prometryn	72.3	68.4	73.5	67.3	5.58		8.80
	Pronamide	80.4	81.7	84.1	78.0	1.57		7.60
	Propiconazole	102	98.2	95.8	91.4	3.39		4.70
	Pyriproxyfen	30.0	83.6	34.1	33.9	94.5		0.476
	Simazine	75.6	84.0	85.6	80.3	10.6		6.34
	Sulfentrazone	105	142	155	135	30.2		13.3
	Tebuconazole	44.0	73.4	70.1	67.5	50.1		3.84
	Terbufos	114	108	117	114	5.18		2.97
	Terbutylazine	76.7	80.9	82.0	77.3	5.24		5.93
EPA 8321B	2,4-D	89.0		110	95.7			9.82
	2,4,5-T	89.5		109	113			3.75
	Acesulfame K	104		150	142			5.21
	Acetaminophen	82.9		115	102			12.2
	Acetamiprid	84.3		84.1	85.6			1.74
	Afidopyropen	68.8		79.4	74.3			6.75
	AMPA	95.8		61.8	60.3			2.38
	Bentazon	88.0		58.9	62.3			5.56
	Benzovindiflupyr	75.5		95.1	89.9			5.66
	Carbamazepine	86.1		106	102			3.54
	Clothianidin	88.8		124	103			9.41
	Dinotefuran	74.6		131	115			13.2
	Diuron	80.2		85.1	80.1			4.48
	Endothall	82.9		96.3	89.5			7.33
	Fenuron	83.2		93.8	92.4			1.47
	Fluridone	89.9		106	97.7			8.48

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Glufosinate	97.0	64.7	65.4		1.06
	Glyphosate	95.6	106	107		0.379
	Hydrocodone	78.1	107	97.8		9.38
	Ibuprofen	79.0	89.6	90.7		1.29
	Imazapyr	92.9	135	93.1		15.0
	Imidacloprid	80.8	166	160		1.03
	Linuron	69.4	80.9	82.1		1.49
	Mandestrobin	77.1	95.0	94.6		0.469
	MCP	88.2	110	114		3.81
	Naproxen	95.5	156	121		25.1
	Primidone	81.7	99.3	98.8		0.473
	Pyraclostrobin	77.9	91.2	86.4		5.36
	Sucralose	94.8	94.5	96.6		1.28
	Thiamethoxam	81.6	126	146		4.21
	Tolfenpyrad	50.2	57.4	53.8		6.37
	Triclopyr	90.1	107	110		3.04
SM 2120 B-2011	Color (true)	98.3			0.357	
SM 2320 B-2011	Total Alkalinity	99.2			0.0802	
SM 2540 C-2011	TDS				8.85	
SM 4500 F-C-2011	Fluoride	100	98.7	98.7		0.0
SM 5310 B-2011	Organic Carbon	96.5	99.2	98.6		0.338

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2286184
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2286195
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2286195
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2286184
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2286184
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2286185
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2286185
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2286185
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2286185
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2286186
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2286196
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2286192
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2286184
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2286184
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2286195
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2286184
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2286184
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2286184
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2286185

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	10/27/2021			10/27/2021 15:55	Sarah A Nixon	2286184
EPA 200.7 Rev. 4.4	10/27/2021	10/29/2021 09:30	Emily M Philpot	11/02/2021 15:21	Josef B Mick	2286195
EPA 200.8 Rev. 5.4	10/27/2021	10/29/2021 09:30	Emily M Philpot	11/02/2021 18:36	McKinley C Carter	2286195
EPA 300.0 Rev. 2.1	10/27/2021			11/03/2021 16:44	Roberta Tatti	2286184
EPA 350.1 Rev. 2.0	10/27/2021			11/02/2021 12:58	Ping Hua	2286185
EPA 351.2 Rev. 2.0	10/27/2021	11/04/2021 12:43	Benjamin T. Nordmann	11/05/2021 10:09	Alexandra J Mattheus	2286185
EPA 353.2 Rev. 2.0	10/27/2021			10/29/2021 10:02	Beverly Y. Sanders	2286185
EPA 365.1 Rev. 2.0	10/27/2021	11/03/2021 16:35	Simonne.V. Calhoun	11/05/2021 15:42	Sarah A Nixon	2286185
EPA 365.1 Rev. 2.0 dissolved	10/27/2021			10/27/2021 14:33	James L Waggerby	2286186
EPA 8270E	10/27/2021	11/02/2021 10:00	Fe-Val Siddell	11/06/2021 16:29	Michael Poppell	2286196
	10/27/2021	11/02/2021 10:00	Fe-Val Siddell	11/11/2021 19:17	Michael Poppell	2286196
	10/27/2021	11/02/2021 10:00	Fe-Val Siddell	11/11/2021 20:32	Michael Poppell	2286196
EPA 8321B	10/27/2021	10/29/2021 10:35	Mohammad Ghaffari	10/29/2021 12:00	Mohammad Ghaffari	2286192
	10/27/2021	10/29/2021 10:35	Mohammad Ghaffari	10/29/2021 13:20	Manjita Shrestha	2286192
	10/27/2021	10/29/2021 14:00	Hoor Shaik	11/03/2021 06:28	Juyoung Kim	2286192
SM 2120 B-2011	10/27/2021			10/27/2021 15:23	Benjamin T. Nordmann	2286184
SM 2320 B-2011	10/27/2021			10/29/2021 01:04	Dale L. Simmons	2286184
SM 2340B	10/27/2021			11/02/2021 15:21	Josef B Mick	2286195
SM 2540 C-2011	10/27/2021			11/01/2021 14:21	Yijie Li	2286184
SM 2540 D-2011	10/27/2021			11/01/2021 14:21	Yijie Li	2286184
SM 4500 F-C-2011	10/27/2021			10/29/2021 01:04	Dale L. Simmons	2286184
SM 5310 B-2011	10/27/2021			10/30/2021 01:04	Khloe J Berg	2286185