

Chemical Analysis Report

WAS-SECT-2021-07-12-01

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

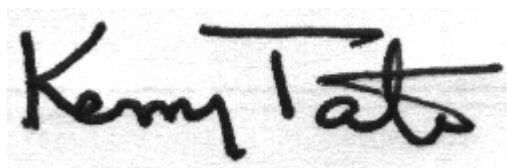
Event Description: **LVI x 2**
Request ID: **RQ-2021-07-12-02**
Customer: **WAS-SECT**
Project ID: **SMP**

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

Date Certified: 02-AUG-2021 11:40

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Bayou George Lake

Collection Date/Time: 07/12/2021 12:02

Field ID: G3WA0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261319	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P400902	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P401053	
		Sulfate	0.92		mg SO4/L	P401056	
	SM 2120 B-2011	Color (true)	400		PCU	P400891	
	SM 2320 B-2011	Total Alkalinity	2.1	I	mg CaCO3/L	P401021	RPD
	SM 2540 C-2011	TDS	74		mg/L	P401315	
	SM 2540 D-2011	TSS	4	I	mg/L	P401120	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401024	
2261320	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P401414	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P401176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P400937	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P400930	
	SM 5310 B-2011	Organic Carbon	31		mg C/L	P401160	
2261321	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P400864	
2261323	EPA 8321B	2,4-D	0.0020	U	ug/L	P400846	
		Acesulfame K	0.10	U	ug/L	P400842	
		2,4,5-T	0.0040	U	ug/L	P400846	
		AMPA	0.10	U	ug/L	P400842	
		Acetaminophen	0.0080	U	ug/L	P400846	
		Acetamiprid	0.0020	U	ug/L	P400846	
		Endothall	0.25	U	ug/L	P400842	
		Glufosinate	0.10	U	ug/L	P400842	
		Glyphosate	0.10	U	ug/L	P400842	
		Afidopyropen	0.0020	U	ug/L	P400846	
		Bentazon	8.0E-04	U	ug/L	P400846	
		Sucralose	0.043		ug/L	P400842	
		Benzovindiflupyr	0.0020	U	ug/L	P400846	
		Carbamazepine	8.0E-04	U	ug/L	P400846	
		Clothianidin	0.0020	U	ug/L	P400846	
		Dinotefuran	0.0020	U	ug/L	P400846	
		Diuron	0.0020	U	ug/L	P400846	
		Fenuron	0.016	U	ug/L	P400846	
		Fluridone	8.0E-04	U	ug/L	P400846	
		Imazapyr	0.11		ug/L	P400846	MS, RPD
		Hydrocodone	0.0020	U	ug/L	P400846	
		Ibuprofen	0.020	U	ug/L	P400846	
		Imidacloprid	0.0025	I	ug/L	P400846	
		Linuron	0.0040	U	ug/L	P400846	
		Mandestrobin	0.0020	U	ug/L	P400846	
		MCP	0.0020	U	ug/L	P400846	
		Naproxen	0.0080	U	ug/L	P400846	
		Primidone	0.0040	U	ug/L	P400846	
		Pyraclostrobin	0.0020	U	ug/L	P400846	

Field ID: G3WA0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261323	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P400846	MS
		Tolfenpyrad	0.0020	U	ug/L	P400846	
		Triclopyr	0.0040	U	ug/L	P400846	
2261324	EPA 200.7 Rev. 4.4	Calcium	3.66		mg/L	P400847	
		Iron	2.14E+03		ug/L	P400847	
		Magnesium	0.77		mg/L	P400847	
		Potassium	0.65	I	mg/L	P400847	
		Sodium	2.9		mg/L	P400847	
		Strontium	30.5		ug/L	P400847	
		Tin	3.0	U	ug/L	P400847	
		Titanium	1.3	I	ug/L	P400847	
		Vanadium	2.0	U	ug/L	P400847	
		Zinc	6.4	I	ug/L	P400847	
	EPA 200.8 Rev. 5.4	Aluminum	752		ug/L	P400847	
		Antimony	0.050	U	ug/L	P400847	
		Arsenic	0.90		ug/L	P400847	
		Barium	9.51		ug/L	P400847	
		Beryllium	0.050		ug/L	P400847	
		Boron**	14.7		ug/L	P400847	
		Cadmium	0.020	U	ug/L	P400847	
		Chromium	0.85	I	ug/L	P400847	
		Cobalt	0.307		ug/L	P400847	
		Copper	0.40	U	ug/L	P400847	
		Lead	0.77		ug/L	P400847	
		Manganese	20.4		ug/L	P400847	
		Molybdenum	0.15	U	ug/L	P400847	
		Nickel	0.55	I	ug/L	P400847	
		Selenium	0.22	I	ug/L	P400847	
		Silver	0.010	U	ug/L	P400847	
		Thallium	0.10	U	ug/L	P400847	
		Hardness	12.3		mg/L	P400847	
2261325	SM 2340B	Acetochlor	0.24	U	ng/L	P400826	
	EPA 8270E	Alachlor	0.24	U	ng/L	P400826	
		Ametryn	0.58	U	ng/L	P400826	
		Atrazine	2.9		ng/L	P400826	
		Atrazine Desethyl	1.5	U	ng/L	P400826	
		Azinphos Methyl	1.9	UJ	ng/L	P400826	LCS, RPD
		Azoxystrobin**	1.3	I	ng/L	P400826	
		Bromacil	0.48	U	ng/L	P400826	
		Butylate	0.39	U	ng/L	P400826	
		Caffeine**	15	I	ng/L	P400826	
		Carbophenothion	0.48	U	ng/L	P400826	
		Carfentrazone Ethyl**	0.097	U	ng/L	P400826	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P400826	
		Chlorpyrifos Methyl	0.048	U	ng/L	P400826	

Field ID: G3WA0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261325	EPA 8270E	Cyanazine	3.2	U	ng/L	P400826	
		Demeton	1.5	U	ng/L	P400826	
		Diazinon	0.12	U	ng/L	P400826	
		Difenoconazole**	0.58	U	ng/L	P400826	
		Dimethenamid**	0.40		ng/L	P400826	
		Disulfoton	0.48	U	ng/L	P400826	
		Dithiopyr**	0.17	U	ng/L	P400826	
		EPTC	1.2	U	ng/L	P400826	
		Ethion	0.15	U	ng/L	P400826	
		Ethoprop	0.097	U	ng/L	P400826	
		Fenamiphos	0.48	U	ng/L	P400826	RPD
		Fenbuconazole**	0.12	U	ng/L	P400826	MS
		Fipronil	0.24	U	ng/L	P400826	
		Fipronil Desulfinyl**	0.12	U	ng/L	P400826	MS
		Fipronil Sulfide	0.15	U	ng/L	P400826	
		Fipronil Sulfone	0.15	U	ng/L	P400826	MS
		Fluazifop-P-butyl**	0.097	U	ng/L	P400826	
		Fludioxonil**	0.12	U	ng/L	P400826	MS
		Flumioxazin**	1.7	U	ng/L	P400826	
		Flutolanil**	0.097	U	ng/L	P400826	
		Fluxapyroxad**	0.097	U	ng/L	P400826	MS
		Fonofos	0.19	U	ng/L	P400826	
		Hexazinone	0.78	I	ng/L	P400826	
		Imazalil**	0.73	U	ng/L	P400826	RPD
		Iprodione**	0.58	UJ	ng/L	P400826	LCS
		Malathion	0.34	U	ng/L	P400826	
		Metalaxyl	0.73	U	ng/L	P400826	
		Metolachlor	0.63	I	ng/L	P400826	MS
		Metribuzin	3.2	U	ng/L	P400826	
		Mevinphos	1.0	U	ng/L	P400826	
		Molinate	0.29	U	ng/L	P400826	
		Myclobutanil**	0.24	U	ng/L	P400826	
		Naled**	1.5	U	ng/L	P400826	
		Norflurazon	0.48	UJ	ng/L	P400826	LCS
		Oxadiazon	0.29	U	ng/L	P400826	
		Oxyfluorfen**	0.15	U	ng/L	P400826	
		Parathion Ethyl	0.24	U	ng/L	P400826	
		Parathion Methyl	0.53	U	ng/L	P400826	
		Pendimethalin	0.97	U	ng/L	P400826	
		Phorate	0.51	U	ng/L	P400826	
		Prodiamine**	0.17	U	ng/L	P400826	
		Prometon	0.87	U	ng/L	P400826	
		Prometryn	0.19	U	ng/L	P400826	
		Pronamide**	0.15	U	ng/L	P400826	
		Propiconazole**	1.1	I	ng/L	P400826	

Field ID: G3WA0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261325	EPA 8270E	Pyriproxyfen**	0.12	UJ	ng/L	P400826	LCS, MS
		Simazine	0.48	U	ng/L	P400826	
		Sulfentrazone**	0.90	I	ng/L	P400826	
		Tebuconazole**	0.48	UJ	ng/L	P400826	RPD
		Terbufos	0.097	U	ng/L	P400826	
		Terbuthylazine	0.41	U	ng/L	P400826	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 07/16/2021.

EPA 8270E: 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: P400902

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P400847

Component	Result	Code	Units
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
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400847

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	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
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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: P401053

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401056

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P401414

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P401176

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400937

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400930

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400864

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

Reference Method: EPA 8270E
Batch ID: P400826

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P400826

Component	Result	Code	Units
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
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 Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P400826

Component	Result	Code	Units
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
Metaxyl	0.75	U	ng/L
Metaxyl	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P400826

Component	Result	Code	Units
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8321B

Batch ID: P400842

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: P400846

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	0.0020	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: P400891

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P401021

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

Reference Method: SM 2540 C-2011
Batch ID: P401315

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P401120

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P401024

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P401160

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: P400847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	109		P	85 - 115
Magnesium	112		P	85 - 115
Potassium	103		P	85 - 115
Sodium	101		P	85 - 115
Strontium	100		P	85 - 115
Tin	94.9		P	85 - 115
Titanium	99.0		P	85 - 115
Vanadium	86.9		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P400847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	108		P	85 - 115
Antimony	112		P	85 - 115
Arsenic	105		P	85 - 115
Barium	108		P	85 - 115
Beryllium	110		P	85 - 115
Boron	108		P	85 - 115
Cadmium	111		P	85 - 115
Chromium	103		P	85 - 115
Cobalt	99.2		P	85 - 115
Copper	96.7		P	85 - 115
Lead	104		P	85 - 115
Manganese	105		P	85 - 115
Molybdenum	98.5		P	85 - 115
Nickel	95.8		P	85 - 115
Selenium	112		P	85 - 115
Silver	104		P	85 - 115
Thallium	111		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401053

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401056

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P401414

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P401176

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P400937

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P400930

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P400864

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

Reference Method: EPA 8270E
 Batch ID: P400826

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	98.3	P/P	70 - 121
Alachlor	94.5	92.5	P/P	70 - 119
Ametryn	103	109	P/P	61 - 135
Atrazine	115	111	P/P	76 - 123
Atrazine Desethyl	107	103	P/P	35 - 140
Azinphos Methyl	174	170	F/F	57 - 163
Azoxystrobin	98.3	104	P/P	43 - 231
Bromacil	104	90.1	P/P	42 - 123
Butylate	50.1	55.1	P/P	34 - 92.0
Caffeine	71.9	77.3	P/P	70 - 130
Carbophenothion	119	108	P/P	61 - 121
Carfentrazone Ethyl	130	130	P/P	62 - 139
Chlorpyrifos Ethyl	110	111	P/P	67 - 121
Chlorpyrifos Methyl	107	111	P/P	67 - 120
Cyanazine	143	135	P/P	20 - 226
Demeton	81.3	88.1	P/P	35 - 125
Diazinon	92.5	87.6	P/P	70 - 122
Difenoconazole	176	169	P/P	56 - 186
Dimethenamid	83.6	77.4	P/P	67 - 119
Disulfoton	89.4	90.4	P/P	47 - 120
Dithiopyr	95.1	92.3	P/P	67 - 118
EPTC	48.3	48.0	P/P	33 - 90.0
Ethion	122	91.5	P/P	40 - 133
Ethoprop	85.4	89.5	P/P	61 - 121
Fenamiphos	104	94.7	P/P	31 - 139
Fenbuconazole	119	114	P/P	66 - 141
Fipronil	102	93.8	P/P	62 - 129
Fipronil Desulfiny	109	105	P/P	59 - 126

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P400826

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfide	110	115	P/P	63 - 117
Fipronil Sulfone	103	105	P/P	57 - 117
Fluazifop-P-butyl	114	110	P/P	63 - 124
Fludioxonil	117	113	P/P	63 - 123
Flumioxazin	191	200	P/P	34 - 245
Flutolanil	110	106	P/P	56 - 131
Fluxapyroxad	94.3	100	P/P	57 - 117
Fonofos	83.9	85.3	P/P	61 - 116
Hexazinone	111	105	P/P	55 - 138
Imazalil	113	117	P/P	33 - 143
Iprodione	136	124	F/F	59 - 118
Malathion	120	122	P/P	62 - 138
Metalaxyl	96.9	94.0	P/P	24 - 147
Metolachlor	102	101	P/P	68 - 118
Metribuzin	103	103	P/P	20 - 239
Mevinphos	75.6	79.9	P/P	46 - 124
Molinate	59.2	63.1	P/P	46 - 100
Myclobutanil	107	103	P/P	32 - 149
Naled	44.0	47.1	P/P	32 - 95.0
Norflurazon	130	135	F/F	57 - 127
Oxadiazon	100	98.0	P/P	63 - 118
Oxyfluorfen	104	95.1	P/P	69 - 137
Parathion Ethyl	91.2	98.2	P/P	70 - 113
Parathion Methyl	119	112	P/P	71 - 130
Pendimethalin	92.4	97.0	P/P	55 - 118
Phorate	83.5	89.6	P/P	46 - 125
Prodiamine	57.7	58.7	P/P	20 - 141
Prometon	96.0	94.6	P/P	54 - 122
Prometryn	95.9	94.9	P/P	66 - 124
Pronamide	92.2	90.5	P/P	79 - 122
Propiconazole	110	105	P/P	61 - 126
Pyriproxyfen	135	121	F/P	52 - 131
Simazine	110	110	P/P	75 - 128
Sulfentrazone	111	114	P/P	20 - 132
Tebuconazole	59.2	43.4	P/P	20 - 116
Terbufos	102	108	P/P	61 - 117
Terbuthylazine	98.3	94.5	P/P	74 - 116

Reference Method: EPA 8321B

Batch ID: P400842

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	97.5		P	40 - 150
Endothall	97.5		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	97.0		P	40 - 150
Sucralose	102		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P400846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	30 - 160
2,4,5-T	108		P	30 - 160
Acetaminophen	79.9		P	30 - 160
Acetamiprid	83.6		P	30 - 160
Afidopyropen	63.4		P	30 - 160
Bentazon	98.7		P	30 - 160
Benzovindiflupyr	89.1		P	30 - 160
Carbamazepine	99.5		P	30 - 160
Clothianidin	93.4		P	30 - 160
Dinotefuran	92.3		P	30 - 160
Diuron	88.5		P	30 - 160
Fenuron	99.4		P	30 - 160
Fluridone	94.9		P	30 - 160
Hydrocodone	95.5		P	30 - 160
Ibuprofen	91.9		P	30 - 160
Imazapyr	91.8		P	30 - 160
Imidacloprid	91.1		P	30 - 160
Linuron	80.9		P	30 - 160
Mandestrobin	91.5		P	30 - 160
MCPP	110		P	30 - 160
Naproxen	81.0		P	30 - 160
Primidone	93.9		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	98.9		P	30 - 160
Tolfenpyrad	42.3		P	30 - 160
Triclopyr	108		P	30 - 160

Reference Method: SM 2120 B-2011

Batch ID: P400891

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	85 - 115

Reference Method: SM 2320 B-2011

Batch ID: P401021

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P401024

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

Reference Method: SM 5310 B-2011

Batch ID: P401160

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P400847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261183	Calcium	109		P	80 - 120
2261183	Iron	108		P	80 - 120
2261183	Magnesium	111		P	80 - 120
2261183	Potassium	102		P	80 - 120
2261183	Sodium	106		P	80 - 120
2261183	Strontium	101		P	80 - 120
2261183	Tin	93.2		P	80 - 120
2261183	Titanium	101		P	80 - 120
2261183	Vanadium	100		P	80 - 120
2261183	Zinc	106		P	80 - 120
2261511	Calcium	106		P	80 - 120
2261511	Iron	112	114	P/P	80 - 120
2261511	Magnesium	115	117	P/P	80 - 120
2261511	Potassium	104	105	P/P	80 - 120
2261511	Sodium	102		P	80 - 120
2261511	Strontium	103	103	P/P	80 - 120
2261511	Tin	100	100	P/P	80 - 120
2261511	Titanium	105	105	P/P	80 - 120
2261511	Vanadium	104	104	P/P	80 - 120
2261511	Zinc	110	110	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P400847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261183	Aluminum	107		P	80 - 120
2261183	Antimony	110		P	80 - 120
2261183	Arsenic	104		P	80 - 120
2261183	Barium	108		P	80 - 120
2261183	Beryllium	108		P	80 - 120
2261183	Boron	112		P	80 - 120
2261183	Cadmium	110		P	80 - 120
2261183	Chromium	103		P	80 - 120
2261183	Cobalt	96.6		P	80 - 120
2261183	Copper	96.0		P	80 - 120
2261183	Lead	106		P	80 - 120
2261183	Manganese	105		P	80 - 120
2261183	Molybdenum	94.8		P	80 - 120
2261183	Nickel	97.7		P	80 - 120
2261183	Selenium	109		P	80 - 120
2261183	Silver	103		P	80 - 120
2261183	Thallium	111		P	80 - 120
2261511	Aluminum	106	109	P/P	80 - 120
2261511	Antimony	115	118	P/P	80 - 120
2261511	Arsenic	106	108	P/P	80 - 120
2261511	Barium	109	111	P/P	80 - 120
2261511	Beryllium	114	115	P/P	80 - 120
2261511	Boron	109	110	P/P	80 - 120
2261511	Cadmium	111	112	P/P	80 - 120
2261511	Chromium	104	106	P/P	80 - 120
2261511	Cobalt	98.4	100	P/P	80 - 120
2261511	Copper	95.9	98.2	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261511	Lead	107	109	P/P	80 - 120
2261511	Manganese	104	108	P/P	80 - 120
2261511	Molybdenum	100	102	P/P	80 - 120
2261511	Nickel	96.1	97.4	P/P	80 - 120
2261511	Selenium	113	113	P/P	80 - 120
2261511	Silver	103	103	P/P	80 - 120
2261511	Thallium	112	115	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261296	Chloride	97.9		P	90 - 110
2261366	Chloride	94.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261296	Sulfate	101		P	90 - 110
2261366	Sulfate	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P401414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261299	Ammonia-N	96.4	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P401176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261360	Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261261	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261368	Total-P	103	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400864

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261265	O-Phosphate-P	101	100	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P400826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2260316	Acetochlor	121	106	P/P	66 - 122
2260316	Alachlor	121	109	P/P	65 - 122
2260316	Ametryn	115	104	P/P	45 - 173
2260316	Atrazine	131	116	P/P	70 - 134
2260316	Atrazine Desethyl	140	113	P/P	25 - 150
2260316	Azinphos Methyl	160	85.3	P/P	44 - 174
2260316	Azoxystrobin	128	113	P/P	10 - 268
2260316	Bromacil	125	114	P/P	31 - 145
2260316	Butylate	72.5	76.4	P/P	15 - 97.0
2260316	Caffeine	104	89.8	P/P	70 - 130
2260316	Carbophenothion	127	104	P/P	42 - 129
2260316	Carfentrazone Ethyl	140	116	P/P	62 - 145
2260316	Chlorpyrifos Ethyl	114	113	P/P	60 - 124
2260316	Chlorpyrifos Methyl	97.5	106	P/P	66 - 119
2260316	Cyanazine	162	131	P/P	17 - 225
2260316	Demeton	49.2	49.5	P/P	36 - 142
2260316	Diazinon	111	98.7	P/P	70 - 128
2260316	Difenoconazole	153	130	P/P	33 - 222
2260316	Dimethenamid	107	90.0	P/P	54 - 125
2260316	Disulfoton	65.6	62.9	P/P	49 - 133
2260316	Dithiopyr	117	102	P/P	55 - 123
2260316	EPTC	59.0	57.0	P/P	19 - 91.0
2260316	Ethion	135	114	P/P	13 - 143
2260316	Ethoprop	113	106	P/P	49 - 144
2260316	Fenamiphos	92.2	59.4	P/P	32 - 136
2260316	Fenbuconazole	167	131	F/P	73 - 148
2260316	Fipronil	115	100	P/P	57 - 129
2260316	Fipronil Desulfinyl	143	120	F/P	49 - 127
2260316	Fipronil Sulfide	125	120	P/P	44 - 127
2260316	Fipronil Sulfone	131	124	F/P	35 - 126
2260316	Fluazifop-P-butyl	126	107	P/P	67 - 129
2260316	Fludioxonil	145	108	F/P	61 - 126
2260316	Flumioxazin	160	138	P/P	38 - 279
2260316	Flutolanil	128	115	P/P	55 - 136
2260316	Fluxapyroxad	149	117	F/P	33 - 140
2260316	Fonofos	87.5	88.8	P/P	58 - 125
2260316	Hexazinone	128	114	P/P	57 - 148
2260316	Imazalil	115	14.8	P/P	10 - 221
2260316	Iprodione	137	117	P/P	32 - 140
2260316	Malathion	116	101	P/P	52 - 138
2260316	Metalaxyl	123	106	P/P	46 - 134
2260316	Metolachlor	129	114	F/P	58 - 122
2260316	Metribuzin	127	112	P/P	16 - 272
2260316	Mevinphos	71.9	67.3	P/P	45 - 140
2260316	Molinate	81.7	78.9	P/P	41 - 103
2260316	Myclobutanil	128	113	P/P	60 - 134
2260316	Naled	48.4	60.1	P/P	20 - 113
2260316	Norflurazon	108	100	P/P	51 - 123
2260316	Oxadiazon	122	109	P/P	44 - 125
2260316	Oxyfluorfen	113	105	P/P	66 - 176
2260316	Parathion Ethyl	116	102	P/P	57 - 132
2260316	Parathion Methyl	120	112	P/P	59 - 156

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P400826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2260316	Pendimethalin	118	116	P/P	59 - 129
2260316	Phorate	54.4	55.8	P/P	47 - 136
2260316	Prodiamine	123	107	P/P	10 - 159
2260316	Prometon	121	110	P/P	59 - 127
2260316	Prometryn	120	101	P/P	59 - 129
2260316	Pronamide	108	91.1	P/P	65 - 145
2260316	Propiconazole	151	118	P/P	28 - 165
2260316	Pyriproxyfen	225	180	F/P	21 - 180
2260316	Simazine	123	112	P/P	63 - 147
2260316	Sulfentrazone	132	108	P/P	32 - 136
2260316	Tebuconazole	96.3	80.7	P/P	-8.3 - 117
2260316	Terbufos	83.3	83.3	P/P	61 - 131
2260316	Terbutylazine	119	102	P/P	62 - 126

Reference Method: EPA 8321B

Batch ID: P400842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261285	Acesulfame K	141	133	P/P	40 - 150
2261285	AMPA	96.8	91.8	P/P	40 - 150
2261285	Endothall	115	109	P/P	40 - 150
2261285	Glufosinate	111	110	P/P	40 - 150
2261285	Glyphosate	112	111	P/P	40 - 150
2261285	Sucralose	112	101	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P400846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261122	2,4-D	110	126	P/P	30 - 160
2261122	2,4,5-T	111	117	P/P	30 - 160
2261122	Acetaminophen	101	112	P/P	30 - 160
2261122	Acetamiprid	86.9	105	P/P	30 - 160
2261122	Afidopyropen	73.5	82.5	P/P	30 - 160
2261122	Bentazon	93.1	95.4	P/P	30 - 160
2261122	Benzovindiflupyr	91.4	98.7	P/P	30 - 160
2261122	Carbamazepine	112	124	P/P	30 - 160
2261122	Clothianidin	102	116	P/P	30 - 160
2261122	Dinotefuran	116	131	P/P	30 - 160
2261122	Diuron	89.0	91.6	P/P	30 - 160
2261122	Fenuron	92.7	97.7	P/P	30 - 160
2261122	Fluridone	88.1	97.0	P/P	30 - 160
2261122	Hydrocodone	111	123	P/P	30 - 160
2261122	Ibuprofen	83.9	94.2	P/P	30 - 160
2261122	Imazapyr	100	161	P/F	30 - 160
2261122	Imidacloprid	122	151	P/P	30 - 160
2261122	Linuron	77.9	81.3	P/P	30 - 160
2261122	Mandestrobin	93.5	99.7	P/P	30 - 160
2261122	MCP	111	122	P/P	30 - 160
2261122	Naproxen	83.2	78.0	P/P	30 - 160
2261122	Primidone	110	117	P/P	30 - 160
2261122	Pyraclostrobin	91.0	96.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P400846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261122	Thiamethoxam	130	161	P/F	30 - 160
2261122	Tolfenpyrad	52.7	56.8	P/P	30 - 160
2261122	Triclopyr	106	117	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P401024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2260932	Fluoride	95.7	98.0	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P401160

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261367	Organic Carbon	98.6	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P400902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261258	Turbidity	2.89	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P400847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261511	Calcium	1.01	Spike	P	0 - 20
2261511	Iron	1.47	Spike	P	0 - 20
2261511	Magnesium	1.33	Spike	P	0 - 20
2261511	Potassium	0.0417	Spike	P	0 - 20
2261511	Sodium	0.386	Spike	P	0 - 20
2261511	Strontium	0.461	Spike	P	0 - 20
2261511	Tin	0.0710	Spike	P	0 - 20
2261511	Titanium	0.169	Spike	P	0 - 20
2261511	Vanadium	0.153	Spike	P	0 - 20
2261511	Zinc	0.103	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P400847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261511	Aluminum	3.03	Spike	P	0 - 20
2261511	Antimony	1.73	Spike	P	0 - 20
2261511	Arsenic	2.28	Spike	P	0 - 20
2261511	Barium	1.97	Spike	P	0 - 20
2261511	Beryllium	0.862	Spike	P	0 - 20
2261511	Boron	0.947	Spike	P	0 - 20
2261511	Cadmium	0.703	Spike	P	0 - 20
2261511	Chromium	1.93	Spike	P	0 - 20
2261511	Cobalt	1.79	Spike	P	0 - 20
2261511	Copper	2.32	Spike	P	0 - 20
2261511	Lead	1.81	Spike	P	0 - 20
2261511	Manganese	2.74	Spike	P	0 - 20
2261511	Molybdenum	2.48	Spike	P	0 - 20
2261511	Nickel	1.41	Spike	P	0 - 20
2261511	Selenium	0.440	Spike	P	0 - 20
2261511	Silver	0.256	Spike	P	0 - 20
2261511	Thallium	2.34	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261366	Chloride	1.34	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261366	Sulfate	2.16	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P401414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261299	Ammonia-N	1.40	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P401176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261360	Kjeldahl Nitrogen	0.406	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261261	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261368	Total-P	3.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261265	O-Phosphate-P	0.346	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P400826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2260316	Acetochlor	13.0	Spike	P	0 - 30
2260316	Alachlor	10.5	Spike	P	0 - 30
2260316	Ametryn	10.5	Spike	P	0 - 30
2260316	Atrazine	12.3	Spike	P	0 - 30
2260316	Atrazine Desethyl	21.5	Spike	P	0 - 30
2260316	Azinphos Methyl	60.7	Spike	F	0 - 30
2260316	Azoxystrobin	12.4	Spike	P	0 - 30
2260316	Bromacil	9.07	Spike	P	0 - 30
2260316	Butylate	5.26	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P400826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2260316	Caffeine	14.6	Spike	P	0 - 30
2260316	Carbophenothion	19.9	Spike	P	0 - 30
2260316	Carfentrazone Ethyl	18.8	Spike	P	0 - 30
2260316	Chlorpyrifos Ethyl	1.29	Spike	P	0 - 30
2260316	Chlorpyrifos Methyl	8.17	Spike	P	0 - 30
2260316	Cyanazine	21.1	Spike	P	0 - 30
2260316	Demeton	0.593	Spike	P	0 - 30
2260316	Diazinon	11.3	Spike	P	0 - 30
2260316	Difenoconazole	16.2	Spike	P	0 - 30
2260316	Dimethenamid	16.8	Spike	P	0 - 30
2260316	Disulfoton	4.21	Spike	P	0 - 30
2260316	Dithiopyr	13.7	Spike	P	0 - 30
2260316	EPTC	3.50	Spike	P	0 - 30
2260316	Ethion	17.5	Spike	P	0 - 30
2260316	Ethoprop	6.47	Spike	P	0 - 30
2260316	Fenamiphos	43.3	Spike	F	0 - 30
2260316	Fenbuconazole	23.9	Spike	P	0 - 30
2260316	Fipronil	13.8	Spike	P	0 - 30
2260316	Fipronil Desulfinyl	16.9	Spike	P	0 - 30
2260316	Fipronil Sulfide	3.70	Spike	P	0 - 30
2260316	Fipronil Sulfone	5.38	Spike	P	0 - 30
2260316	Fluazifop-P-butyl	15.6	Spike	P	0 - 30
2260316	Fludioxonil	29.2	Spike	P	0 - 30
2260316	Flumioxazin	15.3	Spike	P	0 - 30
2260316	Flutolanil	11.0	Spike	P	0 - 30
2260316	Fluxapyroxad	23.8	Spike	P	0 - 30
2260316	Fonofos	1.48	Spike	P	0 - 30
2260316	Hexazinone	11.4	Spike	P	0 - 30
2260316	Imazalil	154	Spike	F	0 - 30
2260316	Iprodione	16.1	Spike	P	0 - 30
2260316	Malathion	13.6	Spike	P	0 - 30
2260316	Metalaxyl	15.1	Spike	P	0 - 30
2260316	Metolachlor	12.7	Spike	P	0 - 30
2260316	Metribuzin	12.6	Spike	P	0 - 30
2260316	Mevinphos	6.66	Spike	P	0 - 30
2260316	Molinate	3.41	Spike	P	0 - 30
2260316	Myclobutanil	11.9	Spike	P	0 - 30
2260316	Naled	21.4	Spike	P	0 - 30
2260316	Norflurazon	7.96	Spike	P	0 - 30
2260316	Oxadiazon	11.2	Spike	P	0 - 30
2260316	Oxyfluorfen	7.41	Spike	P	0 - 30
2260316	Parathion Ethyl	12.8	Spike	P	0 - 30
2260316	Parathion Methyl	6.65	Spike	P	0 - 30
2260316	Pendimethalin	1.36	Spike	P	0 - 30
2260316	Phorate	2.62	Spike	P	0 - 30
2260316	Prodiamine	14.2	Spike	P	0 - 30
2260316	Prometon	10.1	Spike	P	0 - 30
2260316	Prometryn	17.2	Spike	P	0 - 30
2260316	Pronamide	17.4	Spike	P	0 - 30
2260316	Propiconazole	25.2	Spike	P	0 - 30
2260316	Pyriproxyfen	22.3	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P400826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2260316	Simazine	9.68	Spike	P	0 - 30
2260316	Sulfentrazone	20.1	Spike	P	0 - 30
2260316	Tebuconazole	17.7	Spike	P	0 - 30
2260316	Terbufos	0.0270	Spike	P	0 - 30
2260316	Terbutylazine	15.4	Spike	P	0 - 30
LFB	Acetochlor	4.89	LCS	P	0 - 30
LFB	Alachlor	2.22	LCS	P	0 - 30
LFB	Ametryn	5.93	LCS	P	0 - 30
LFB	Atrazine	2.96	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.03	LCS	P	0 - 30
LFB	Azinphos Methyl	2.00	LCS	P	0 - 30
LFB	Azoxystrobin	5.90	LCS	P	0 - 30
LFB	Bromacil	14.7	LCS	P	0 - 30
LFB	Butylate	9.62	LCS	P	0 - 30
LFB	Caffeine	7.21	LCS	P	0 - 30
LFB	Carbophenothion	9.76	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	0.344	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	0.734	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.66	LCS	P	0 - 30
LFB	Cyanazine	6.05	LCS	P	0 - 30
LFB	Demeton	8.03	LCS	P	0 - 30
LFB	Diazinon	5.47	LCS	P	0 - 30
LFB	Difenoconazole	3.83	LCS	P	0 - 30
LFB	Dimethenamid	7.70	LCS	P	0 - 30
LFB	Disulfoton	1.16	LCS	P	0 - 30
LFB	Dithiopyr	2.91	LCS	P	0 - 30
LFB	EPTC	0.635	LCS	P	0 - 30
LFB	Ethion	28.5	LCS	P	0 - 30
LFB	Ethoprop	4.63	LCS	P	0 - 30
LFB	Fenamiphos	9.16	LCS	P	0 - 30
LFB	Fenbuconazole	3.98	LCS	P	0 - 30
LFB	Fipronil	8.43	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	4.00	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.08	LCS	P	0 - 30
LFB	Fipronil Sulfone	1.89	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	3.34	LCS	P	0 - 30
LFB	Fludioxonil	3.20	LCS	P	0 - 30
LFB	Flumioxazin	4.54	LCS	P	0 - 30
LFB	Flutolanil	3.50	LCS	P	0 - 30
LFB	Fluxapyroxad	6.09	LCS	P	0 - 30
LFB	Fonofos	1.58	LCS	P	0 - 30
LFB	Hexazinone	5.10	LCS	P	0 - 30
LFB	Imazalil	3.42	LCS	P	0 - 30
LFB	Iprodione	8.50	LCS	P	0 - 30
LFB	Malathion	1.05	LCS	P	0 - 30
LFB	Metalaxyl	3.01	LCS	P	0 - 30
LFB	Metolachlor	0.883	LCS	P	0 - 30
LFB	Metribuzin	0.182	LCS	P	0 - 30
LFB	Mevinphos	5.64	LCS	P	0 - 30
LFB	Molinate	6.42	LCS	P	0 - 30
LFB	Myclobutanil	4.18	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P400826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Naled	6.83	LCS	P	0 - 30
LFB	Norflurazon	3.27	LCS	P	0 - 30
LFB	Oxadiazon	2.11	LCS	P	0 - 30
LFB	Oxyfluorfen	8.53	LCS	P	0 - 30
LFB	Parathion Ethyl	7.38	LCS	P	0 - 30
LFB	Parathion Methyl	5.90	LCS	P	0 - 30
LFB	Pendimethalin	4.81	LCS	P	0 - 30
LFB	Phorate	7.08	LCS	P	0 - 30
LFB	Prodiamine	1.65	LCS	P	0 - 30
LFB	Prometon	1.39	LCS	P	0 - 30
LFB	Prometryn	1.01	LCS	P	0 - 30
LFB	Pronamide	1.84	LCS	P	0 - 30
LFB	Propiconazole	4.45	LCS	P	0 - 30
LFB	Pyriproxyfen	11.2	LCS	P	0 - 30
LFB	Simazine	0.220	LCS	P	0 - 30
LFB	Sulfentrazone	2.31	LCS	P	0 - 30
LFB	Tebuconazole	30.8	LCS	F	0 - 30
LFB	Terbufos	5.09	LCS	P	0 - 30
LFB	Terbutylazine	3.97	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P400842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261285	Acesulfame K	6.15	Spike	P	0 - 30
2261285	AMPA	5.29	Spike	P	0 - 30
2261285	Endothall	5.83	Spike	P	0 - 30
2261285	Glufosinate	0.705	Spike	P	0 - 30
2261285	Glyphosate	1.11	Spike	P	0 - 30
2261285	Sucralose	9.51	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P400846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261122	2,4-D	13.3	Spike	P	0 - 30
2261122	2,4,5-T	5.92	Spike	P	0 - 30
2261122	Acetaminophen	10.5	Spike	P	0 - 30
2261122	Acetamiprid	18.7	Spike	P	0 - 30
2261122	Afidopyropen	11.6	Spike	P	0 - 30
2261122	Bentazon	1.20	Spike	P	0 - 30
2261122	Benzovindiflupyr	7.64	Spike	P	0 - 30
2261122	Carbamazepine	6.80	Spike	P	0 - 30
2261122	Clothianidin	13.5	Spike	P	0 - 30
2261122	Dinotefuran	12.2	Spike	P	0 - 30
2261122	Diuron	2.66	Spike	P	0 - 30
2261122	Fenuron	5.26	Spike	P	0 - 30
2261122	Fluridone	8.29	Spike	P	0 - 30
2261122	Hydrocodone	10.1	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P400846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261122	Ibuprofen	11.7	Spike	P	0 - 30
2261122	Imazapyr	32.2	Spike	F	0 - 30
2261122	Imidacloprid	19.8	Spike	P	0 - 30
2261122	Linuron	4.29	Spike	P	0 - 30
2261122	Mandestrobin	6.46	Spike	P	0 - 30
2261122	MCPP	9.46	Spike	P	0 - 30
2261122	Naproxen	6.36	Spike	P	0 - 30
2261122	Primidone	5.62	Spike	P	0 - 30
2261122	Pyraclostrobin	5.77	Spike	P	0 - 30
2261122	Thiamethoxam	21.4	Spike	P	0 - 30
2261122	Tolfenpyrad	7.38	Spike	P	0 - 30
2261122	Triclopyr	10.3	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P400891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261267	Color (true)	1.42	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P401021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2260932	Total Alkalinity	5.51	Sample	F	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P401315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261359	TDS	8.32	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P401024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2260932	Fluoride	1.90	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P401160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261367	Organic Carbon	0.549	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2261323

Field Sample ID: G3WA0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.3	P	30 - 160
EPA 8321B	Diuron-d6	53.9	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.8	P	30 - 160
EPA 8321B	Primidone-d5	87.7	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2261325

Field Sample ID: G3WA0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	71.6	P	20 - 200
EPA 8270E	Simazine-d10	109	P	73 - 135
EPA 8270E	Terbufos-d10	88.7	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106583

Included Lab Sample IDs: 2261321

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106591

Included Lab Sample IDs: 2261319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	101	P/P	90 - 110
Sulfate	103	102	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A106593

Included Lab Sample IDs: 2261319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106600

Included Lab Sample IDs: 2261319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106607

Included Lab Sample IDs: 2261320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106635

Included Lab Sample IDs: 2261320

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

Reference Method: SM 2320 B-2011

Run ID: A106641

Included Lab Sample IDs: 2261319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A106641

Included Lab Sample IDs: 2261319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	105	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106650

Included Lab Sample IDs: 2261324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.8	101	P/P	90 - 110
Antimony	107	107	P/P	90 - 110
Arsenic	96.9	96.1	P/P	90 - 110
Barium	101	99.9	P/P	90 - 110
Beryllium	96.5	96.1	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	99.3	98.4	P/P	90 - 110
Cobalt	94.8	91.8	P/P	90 - 110
Copper	93.0	90.7	P/P	90 - 110
Lead	99.9	100	P/P	90 - 110
Manganese	99.3	98.3	P/P	90 - 110
Molybdenum	99.2	98.4	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	102	101	P/P	90 - 110
Thallium	97.6	96.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106658

Included Lab Sample IDs: 2261323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	107	P/P	60 - 160
Glufosinate	104	111	P/P	60 - 160
Glyphosate	103	107	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106671

Included Lab Sample IDs: 2261324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	99.2	99.7	P/P	90 - 110
Nickel	94.2	92.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106673

Included Lab Sample IDs: 2261323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	118	113	P/P	60 - 160
Endothall	97.1	97.0	P/P	60 - 160
Sucralose	101	96.0	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A106687

Included Lab Sample IDs: 2261320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.4	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A106694

Included Lab Sample IDs: 2261325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	100		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	111		P	80 - 120
Atrazine Desethyl	113		P	80 - 120
Azinphos Methyl	116		P	80 - 120
Azoxystrobin	91.6		P	80 - 120
Bromacil	110		P	80 - 120
Butylate	96.6		P	80 - 120
Caffeine	98.2		P	80 - 120
Carbophenothion	102		P	80 - 120
Carfentrazone Ethyl	107		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	107		P	80 - 120
Demeton	104		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	119		P	80 - 120
Dimethenamid	104		P	80 - 120
Disulfoton	102		P	80 - 120
Dithiopyr	105		P	80 - 120
EPTC	96.7		P	80 - 120
Ethion	98.4		P	80 - 120
Ethoprop	99.8		P	80 - 120
Fenamiphos	119		P	80 - 120
Fenbuconazole	120		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	113		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	113		P	80 - 120
Fludioxonil	108		P	80 - 120
Flumioxazin	119		P	80 - 120
Flutolanil	108		P	80 - 120
Fluxapyroxad	110		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	106		P	80 - 120
Imazalil	117		P	80 - 120
Iprodione	119		P	80 - 120
Malathion	101		P	80 - 120
Metaxyl	99.9		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	106		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	110		P	80 - 120
Naled	108		P	80 - 120
Norflurazon	111		P	80 - 120
Oxadiazon	108		P	80 - 120
Oxyfluorfen	99.7		P	80 - 120
Parathion Ethyl	98.2		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A106694

Included Lab Sample IDs: 2261325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Methyl	102		P	80 - 120
Pendimethalin	101		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	100		P	80 - 120
Prometon	107		P	80 - 120
Prometryn	107		P	80 - 120
Pronamide	102		P	80 - 120
Pyriproxyfen	113		P	80 - 120
Simazine	110		P	80 - 120
Tebuconazole	115		P	80 - 120
Terbufos	102		P	80 - 120
Terbutylazine	106		P	80 - 120

Reference Method: EPA 8321B

Run ID: A106698

Included Lab Sample IDs: 2261323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	105	P/P	50 - 150
2,4,5-T	107	106	P/P	50 - 150
Acetaminophen	94.6	93.7	P/P	60 - 160
Acetamiprid	102	103	P/P	50 - 150
Afidopyropen	98.7	96.9	P/P	50 - 150
Bentazon	111	111	P/P	50 - 160
Benzovindiflupyr	109	107	P/P	50 - 160
Carbamazepine	106	108	P/P	60 - 150
Clothianidin	103	104	P/P	60 - 150
Dinotefuran	103	107	P/P	50 - 150
Diuron	114	116	P/P	60 - 160
Fenuron	108	110	P/P	60 - 150
Fluridone	111	107	P/P	60 - 160
Hydrocodone	110	112	P/P	60 - 150
Ibuprofen	99.5	109	P/P	50 - 160
Imazapyr	98.9	101	P/P	50 - 160
Imidacloprid	99.9	103	P/P	60 - 150
Linuron	105	104	P/P	60 - 150
Mandestrobin	107	108	P/P	50 - 150
MCPP	101	107	P/P	50 - 150
Naproxen	109	96.2	P/P	50 - 160
Primidone	101	106	P/P	60 - 150
Pyraclostrobin	108	109	P/P	60 - 150
Thiamethoxam	107	112	P/P	50 - 150
Tolfenpyrad	102	103	P/P	60 - 150
Triclopyr	102	102	P/P	50 - 150

Reference Method: EPA 8270E

Run ID: A106700

Included Lab Sample IDs: 2261325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Propiconazole	114		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A106700
 Included Lab Sample IDs: 2261325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfentrazone	110		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
 Run ID: A106709
 Included Lab Sample IDs: 2261324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	90 - 110
Iron	99.3	98.3	P/P	90 - 110
Magnesium	99.5	98.7	P/P	90 - 110
Potassium	98.3	96.6	P/P	90 - 110
Sodium	96.4	95.2	P/P	90 - 110
Strontium	98.5	96.8	P/P	90 - 110
Tin	96.3	95.8	P/P	90 - 110
Titanium	97.9	96.9	P/P	90 - 110
Vanadium	98.1	97.5	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A106716
 Included Lab Sample IDs: 2261320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	93.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A106772
 Included Lab Sample IDs: 2261320

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.89	
EPA 200.7 Rev. 4.4	Calcium	106		109	106			1.01
	Iron	109		108	112	114		1.47
	Magnesium	112		111	115	117		1.33
	Potassium	103		102	104	105		0.0417
	Sodium	101		106	102			0.386
	Strontium	100		101	103	103		0.461
	Tin	94.9		93.2	100	100		0.0710
	Titanium	99.0		101	105	105		0.169
	Vanadium	86.9		100	104	104		0.153
	Zinc	105		106	110	110		0.103
EPA 200.8 Rev. 5.4	Aluminum	108		106	109	107		3.03
	Antimony	112		115	118	110		1.73
	Arsenic	105		106	108	104		2.28
	Barium	108		109	111	108		1.97
	Beryllium	110		114	115	108		0.862
	Boron	108		109	110	112		0.947
	Cadmium	111		111	112	110		0.703
	Chromium	103		104	106	103		1.93
	Cobalt	99.2		98.4	100	96.6		1.79
	Copper	96.7		95.9	98.2	96.0		2.32
	Lead	104		107	109	106		1.81
	Manganese	105		104	108	105		2.74
	Molybdenum	98.5		100	102	94.8		2.48
	Nickel	95.8		97.7	96.1	97.4		1.41
	Selenium	112		113	113	109		0.440
	Silver	104		103	103	103		0.256
	Thallium	111		112	115	111		2.34
EPA 300.0 Rev. 2.1	Chloride	95.7		94.7	97.9		1.34	
	Sulfate	102		98.0	101		2.16	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6		96.4	94.8			1.40
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		105	104			0.406
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0		96.5	96.5			0.0
EPA 365.1 Rev. 2.0	Total-P	103		103	107			3.03
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.9		101	100			0.346
EPA 8270E	Acetochlor	103	98.3	121	106	4.89		13.0
	Alachlor	94.5	92.5	121	109	2.22		10.5
	Ametryn	103	109	115	104	5.93		10.5
	Atrazine	115	111	131	116	2.96		12.3
	Atrazine Desethyl	107	103	140	113	4.03		21.5
	Azinphos Methyl	174	170	160	85.3	2.00		60.7
	Azoxystrobin	98.3	104	128	113	5.90		12.4
	Bromacil	104	90.1	125	114	14.7		9.07
	Butylate	50.1	55.1	72.5	76.4	9.62		5.26
	Caffeine	71.9	77.3	104	89.8	7.21		14.6
	Carbophenothion	119	108	127	104	9.76		19.9
	Carfentrazone Ethyl	130	130	140	116	0.344		18.8
	Chlorpyrifos Ethyl	110	111	114	113	0.734		1.29
	Chlorpyrifos Methyl	107	111	97.5	106	3.66		8.17
	Cyanazine	143	135	162	131	6.05		21.1
	Demeton	81.3	88.1	49.2	49.5	8.03		0.593
	Diazinon	92.5	87.6	111	98.7	5.47		11.3
	Difenoconazole	176	169	153	130	3.83		16.2
	Dimethenamid	83.6	77.4	107	90.0	7.70		16.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Disulfoton	89.4	90.4	65.6	62.9	1.16		4.21
	Dithiopyr	95.1	92.3	117	102	2.91		13.7
	EPTC	48.3	48.0	59.0	57.0	0.635		3.50
	Ethion	122	91.5	135	114	28.5		17.5
	Ethoprop	85.4	89.5	113	106	4.63		6.47
	Fenamiphos	104	94.7	92.2	59.4	9.16		43.3
	Fenbuconazole	119	114	167	131	3.98		23.9
	Fipronil	102	93.8	115	100	8.43		13.8
	Fipronil Desulfinyl	109	105	143	120	4.00		16.9
	Fipronil Sulfide	110	115	125	120	4.08		3.70
	Fipronil Sulfone	103	105	131	124	1.89		5.38
	Fluazifop-P-butyl	114	110	126	107	3.34		15.6
	Fludioxonil	117	113	145	108	3.20		29.2
	Flumioxazin	191	200	160	138	4.54		15.3
	Flutolanil	110	106	128	115	3.50		11.0
	Fluxapyroxad	94.3	100	149	117	6.09		23.8
	Fonofos	83.9	85.3	87.5	88.8	1.58		1.48
	Hexazinone	111	105	128	114	5.10		11.4
	Imazalil	113	117	115	14.8	3.42		154
	Iprodione	136	124	137	117	8.50		16.1
	Malathion	120	122	116	101	1.05		13.6
	Metalaxyl	96.9	94.0	123	106	3.01		15.1
	Metolachlor	102	101	129	114	0.883		12.7
	Metribuzin	103	103	127	112	0.182		12.6
	Mevinphos	75.6	79.9	71.9	67.3	5.64		6.66
	Molinate	59.2	63.1	81.7	78.9	6.42		3.41
	Myclobutanil	107	103	128	113	4.18		11.9
	Naled	44.0	47.1	48.4	60.1	6.83		21.4
	Norflurazon	130	135	108	100	3.27		7.96
	Oxadiazon	100	98.0	122	109	2.11		11.2
	Oxyfluorfen	104	95.1	113	105	8.53		7.41
	Parathion Ethyl	91.2	98.2	116	102	7.38		12.8
	Parathion Methyl	119	112	120	112	5.90		6.65
	Pendimethalin	92.4	97.0	118	116	4.81		1.36
	Phorate	83.5	89.6	54.4	55.8	7.08		2.62
	Prodiamine	57.7	58.7	123	107	1.65		14.2
	Prometon	96.0	94.6	121	110	1.39		10.1
	Prometryn	95.9	94.9	120	101	1.01		17.2
	Pronamide	92.2	90.5	108	91.1	1.84		17.4
	Propiconazole	110	105	151	118	4.45		25.2
	Pyriproxyfen	135	121	225	180	11.2		22.3
	Simazine	110	110	123	112	0.220		9.68
	Sulfentrazone	111	114	132	108	2.31		20.1
	Tebuconazole	59.2	43.4	96.3	80.7	30.8		17.7
	Terbufos	102	108	83.3	83.3	5.09		0.0270
	Terbuthylazine	98.3	94.5	119	102	3.97		15.4
EPA 8321B	2,4-D	110		110	126			13.3
	2,4,5-T	108		111	117			5.92
	Acesulfame K	103		141	133			6.15
	Acetaminophen	79.9		101	112			10.5
	Acetamiprid	83.6		86.9	105			18.7
	Afidopyropen	63.4		73.5	82.5			11.6
	AMPA	97.5		96.8	91.8			5.29
	Bentazon	98.7		93.1	95.4			1.20

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Benzovindiflupyr	89.1	91.4	98.7			7.64
	Carbamazepine	99.5	112	124			6.80
	Clothianidin	93.4	102	116			13.5
	Dinotefuran	92.3	116	131			12.2
	Diuron	88.5	89.0	91.6			2.66
	Endothall	97.5	115	109			5.83
	Fenuron	99.4	92.7	97.7			5.26
	Fluridone	94.9	88.1	97.0			8.29
	Glufosinate	97.7	111	110			0.705
	Glyphosate	97.0	112	111			1.11
	Hydrocodone	95.5	111	123			10.1
	Ibuprofen	91.9	83.9	94.2			11.7
	Imazapyr	91.8	100	161			32.2
	Imidacloprid	91.1	122	151			19.8
	Linuron	80.9	77.9	81.3			4.29
	Mandestrobin	91.5	93.5	99.7			6.46
	MCPP	110	111	122			9.46
	Naproxen	81.0	83.2	78.0			6.36
	Primidone	93.9	110	117			5.62
	Pyraclostrobin	84.4	91.0	96.4			5.77
	Sucralose	102	112	101			9.51
	Thiamethoxam	98.9	130	161			21.4
	Tolfenpyrad	42.3	52.7	56.8			7.38
	Triclopyr	108	106	117			10.3
SM 2120 B-2011	Color (true)	99.5				1.42	
SM 2320 B-2011	Total Alkalinity	103				5.51	
SM 2540 C-2011	TDS					8.32	
SM 4500 F-C-2011	Fluoride	100	95.7	98.0			1.90
SM 5310 B-2011	Organic Carbon	95.6	98.6	97.8			0.549

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2261319
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2261324
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2261324
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2261319
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2261319
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2261320
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2261320
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2261320
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2261320
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2261321
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2261325
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2261323
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2261319
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2261319
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2261324
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2261319
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2261319

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2261319
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2261320

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	07/12/2021			07/13/2021 16:23	Sarah A Nixon	2261319
EPA 200.7 Rev. 4.4	07/12/2021	07/13/2021 14:10	Elliott D. Healy	07/16/2021 20:47	Josef B Mick	2261324
EPA 200.8 Rev. 5.4	07/12/2021	07/13/2021 14:10	Elliott D. Healy	07/15/2021 17:08	Alexander Thompson	2261324
	07/12/2021	07/13/2021 14:10	Elliott D. Healy	07/16/2021 14:08	Alexander Thompson	2261324
EPA 300.0 Rev. 2.1	07/12/2021			07/16/2021 03:15	Lipi Saha	2261319
EPA 350.1 Rev. 2.0	07/12/2021			07/22/2021 13:12	Roberta Tatti	2261320
EPA 351.2 Rev. 2.0	07/12/2021	07/19/2021 15:15	Benjamin T. Nordmann	07/20/2021 18:08	Letuzia M De Oliveira	2261320
EPA 353.2 Rev. 2.0	07/12/2021			07/14/2021 09:17	Beverly Y. Sanders	2261320
EPA 365.1 Rev. 2.0	07/12/2021	07/14/2021 13:05	Simonne.V. Calhoun	07/15/2021 12:01	Shengyu Ding	2261320
EPA 365.1 Rev. 2.0 dissolved	07/12/2021			07/13/2021 14:54	Ping Hua	2261321
EPA 8270E	07/12/2021	07/13/2021 08:30	Rasheda Ghaffari	07/15/2021 16:07	Michael Poppell	2261325
	07/12/2021	07/13/2021 08:30	Rasheda Ghaffari	07/16/2021 20:05	Michael Poppell	2261325
EPA 8321B	07/12/2021	07/15/2021 08:00	Hoor Shaik	07/16/2021 12:06	Juyoung Kim	2261323
	07/12/2021	07/15/2021 10:00	Pramila Ghimire	07/15/2021 13:25	Juyoung Kim	2261323
	07/12/2021	07/15/2021 10:00	Pramila Ghimire	07/16/2021 19:19	Pramila Ghimire	2261323
SM 2120 B-2011	07/12/2021			07/13/2021 18:07	Sarah A Nixon	2261319
SM 2320 B-2011	07/12/2021			07/15/2021 07:16	Dale L. Simmons	2261319
SM 2340B	07/12/2021			07/16/2021 20:47	Josef B Mick	2261324
SM 2540 C-2011	07/12/2021			07/14/2021 14:33	Yijie Li	2261319
SM 2540 D-2011	07/12/2021			07/14/2021 14:02	Yijie Li	2261319
SM 4500 F-C-2011	07/12/2021			07/15/2021 07:16	Dale L. Simmons	2261319
SM 5310 B-2011	07/12/2021			07/17/2021 00:10	Madeline Gruver	2261320