

Chemical Analysis Report

CEN-DIST-2022-07-15-01

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

Event Description: **LAKE Conway - LVI**
Request ID: **RQ-2022-07-11-32**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 03-AUG-2022 10:19

A handwritten signature in black ink, appearing to read "Liang Lin", 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: Lake Conway, Center of Lake

Collection Date/Time: 07/14/2022 13:13

Field ID: G4CE0221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2341952	DEP SOP: NU-094-1	Color (true)	3.4	I	PCU	P416736	
	EPA 180.1 Rev. 2.0	Turbidity	0.70	I	NTU	P416747	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P417113	
		Sulfate	25		mg SO4/L	P417116	
	SM 2320 B-2011	Total Alkalinity	33		mg CaCO3/L	P417081	
	SM 2540 C-2011	TDS	128		mg/L	P417148	
	SM 2540 D-2011	TSS	2	U	mg/L	P417126	
	SM 4500-F- C-2011	Fluoride	0.069	I	mg F/L	P417087	
2341953	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P417312	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P416986	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P416972	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P416886	
	SM 5310 B-2011	Organic Carbon	4.9		mg C/L	P417049	
2341954	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P416745	
2341960	EPA 8321B	2,4-D	0.23		ug/L	P416789	
		Acesulfame K	0.10	U	ug/L	P416590	
		2,4,5-T	0.0040	U	ug/L	P416789	
		AMPA	0.10	U	ug/L	P416590	
		Acetaminophen	0.0080	U	ug/L	P416789	
		Acetamiprid	0.0020	U	ug/L	P416789	
		Endothall	0.25	U	ug/L	P416590	
		Glufosinate	0.10	UJ	ug/L	P416590	LCS
		Glyphosate	0.10	U	ug/L	P416590	
		Afidopyropen	0.0020	U	ug/L	P416789	
		Bentazon	0.0023	I	ug/L	P416789	
		Sucralose	0.51		ug/L	P416590	
		Benzovindiflupyr	0.0020	U	ug/L	P416789	
		Carbamazepine	8.0E-04	U	ug/L	P416789	
		Clothianidin	0.0020	U	ug/L	P416789	
		Dinotefuran	0.0020	U	ug/L	P416789	
		Diuron	0.0020	U	ug/L	P416789	
		Fenuron	0.032	U	ug/L	P416789	
		Fluridone	8.0E-04	U	ug/L	P416789	
		Imazapyr	0.0053	I	ug/L	P416789	
		Hydrocodone	0.0020	U	ug/L	P416789	
		Ibuprofen	0.080	U	ug/L	P416789	
		Imidacloprid	0.0020	UJ	ug/L	P416789	MS
		Linuron	0.0040	U	ug/L	P416789	
		Mandestrobin	0.0020	U	ug/L	P416789	
		MCPP	0.0040	U	ug/L	P416789	
		Naproxen	0.0080	U	ug/L	P416789	
		Primidone	0.0040	U	ug/L	P416789	
		Pyraclostrobin	0.0020	U	ug/L	P416789	

Field ID: G4CE0221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2341960	EPA 8321B	Silvex	0.0040	U	ug/L	P416789	
		Thiamethoxam	0.0020	U	ug/L	P416789	
		Tolfenpyrad	0.0020	U	ug/L	P416789	
		Triclopyr	0.0040	U	ug/L	P416789	
2341961	EPA 200.7 Rev. 4.4	Calcium	16.6		mg/L	P416808	
		Iron	30	U	ug/L	P416808	
		Magnesium	4.23		mg/L	P416808	
		Potassium	3.9		mg/L	P416808	
		Sodium	20.3		mg/L	P416808	
		Strontium	46.1		ug/L	P416808	
		Tin	3.0	U	ug/L	P416808	
		Titanium	0.75	U	ug/L	P416808	
		Vanadium	2.0	U	ug/L	P416808	
		Zinc	5.0	U	ug/L	P416808	
	EPA 200.8 Rev. 5.4	Aluminum	24		ug/L	P416808	
		Antimony	0.20	I	ug/L	P416808	
		Arsenic	2.55		ug/L	P416808	
		Barium	9.49		ug/L	P416808	
		Beryllium	0.010	U	ug/L	P416808	
		Boron	62.1		ug/L	P416808	
		Cadmium	0.020	U	ug/L	P416808	
		Chromium	0.40	U	ug/L	P416808	
		Cobalt	0.020	U	ug/L	P416808	
		Copper	0.59	I	ug/L	P416808	
		Lead	0.20	U	ug/L	P416808	
		Manganese	4.90		ug/L	P416808	
		Molybdenum	0.36	I	ug/L	P416808	
		Nickel	0.50	U	ug/L	P416808	
		Selenium	0.20	U	ug/L	P416808	
		Silver	0.010	U	ug/L	P416808	
		Thallium	0.10	U	ug/L	P416808	
		Hardness	58.8		mg/L	P416808	
2341962	SM 2340 B-2011	Oxybenzone**	9.5	U	ng/L	P416814	
	EPA 8270E	Acetochlor	0.24	U	ng/L	P416814	
		Octinoxate**	40	I	ng/L	P416814	
		Alachlor	0.24	U	ng/L	P416814	
		Avobenzone**	95	U	ng/L	P416814	
		Ametryn	0.57	U	ng/L	P416814	
		Atrazine	33		ng/L	P416814	
		PBDE-47**	3.8	U	ng/L	P416814	
		Atrazine Desethyl	7.6		ng/L	P416814	
		PBDE-99**	4.8	U	ng/L	P416814	
		Azinphos Methyl	1.9	U	ng/L	P416814	
		Tri-o-cresyl Phosphate**	5.7	U	ng/L	P416814	
		Azoxystrobin	0.48	U	ng/L	P416814	

Field ID: G4CE0221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2341962	EPA 8270E	Bromacil	0.48	U	ng/L	P416814	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	11	U	ng/L	P416814	
		Butylate	0.38	U	ng/L	P416814	
		Caffeine**	68		ng/L	P416814	
		Carbophenothion	0.19	U	ng/L	P416814	
		Carfentrazone Ethyl	0.095	U	ng/L	P416814	
		Chlorfenapyr	0.17	U	ng/L	P416814	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P416814	
		Chlorpyrifos Methyl	0.048	U	ng/L	P416814	
		Coumaphos	0.48	U	ng/L	P416814	
		Cyanazine	3.1	U	ng/L	P416814	
		Cyprodinil	0.095	U	ng/L	P416814	
		Demeton	1.4	U	ng/L	P416814	
		Diazinon	0.12	U	ng/L	P416814	
		Difenoconazole	0.57	U	ng/L	P416814	
		Dimethenamid	0.095	U	ng/L	P416814	
		Dimethomorph	0.17	U	ng/L	P416814	
		Disulfoton	0.48	U	ng/L	P416814	
		Dithiopyr	0.17	U	ng/L	P416814	
		EPTC	1.2	U	ng/L	P416814	
		Ethion	0.14	U	ng/L	P416814	
		Ethoprop	0.095	U	ng/L	P416814	
		Etridiazole	0.14	U	ng/L	P416814	
		Fenamiphos	0.48	U	ng/L	P416814	
		Fenbuconazole	0.12	U	ng/L	P416814	
		Fipronil	0.24	U	ng/L	P416814	
		Fipronil Desulfinyl**	0.12	U	ng/L	P416814	
		Fipronil Sulfide	0.14	U	ng/L	P416814	
		Fipronil Sulfone	0.14	U	ng/L	P416814	
		Fluazifop-P-butyl	0.095	U	ng/L	P416814	
		Fludioxonil	0.12	U	ng/L	P416814	
		Flumioxazin	1.7	U	ng/L	P416814	
		Flutolanil	0.095	U	ng/L	P416814	
		Fluxapyroxad	0.095	U	ng/L	P416814	
		Fonofos	0.19	U	ng/L	P416814	
		Hexazinone	0.48	I	ng/L	P416814	
		Imazalil	0.71	U	ng/L	P416814	
		Iprodione	0.57	U	ng/L	P416814	
		Loratadine**	0.095	U	ng/L	P416814	
		Malathion	0.33	U	ng/L	P416814	
		Metalaxyl	0.71	U	ng/L	P416814	
		Metolachlor	0.55	I	ng/L	P416814	
		Metribuzin	2.4	U	ng/L	P416814	
		Mevinphos	1.0	U	ng/L	P416814	

Field ID: G4CE0221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2341962	EPA 8270E	Molinate	0.29	U	ng/L	P416814	
		Myclobutanil	0.24	U	ng/L	P416814	
		Naled	1.4	U	ng/L	P416814	
		Napropamide	0.38	U	ng/L	P416814	
		Norflurazon	0.48	U	ng/L	P416814	
		Oxadiazon	0.29	U	ng/L	P416814	
		Oxyfluorfen	0.14	U	ng/L	P416814	
		Parathion Ethyl	0.24	U	ng/L	P416814	
		Parathion Methyl	0.52	U	ng/L	P416814	
		Pendimethalin	0.95	U	ng/L	P416814	
		Phenytol**	3.3	U	ng/L	P416814	MS
		Phorate	0.50	U	ng/L	P416814	
		Prodiamine	0.17	U	ng/L	P416814	
		Prometon	0.86	U	ng/L	P416814	
		Prometryn	0.19	U	ng/L	P416814	
		Pronamide	0.14	U	ng/L	P416814	
		Propanil	0.12	U	ng/L	P416814	
		Propargite	1.4	U	ng/L	P416814	
		Propiconazole	1.4	I	ng/L	P416814	
		Pyraflufen Ethyl	0.24	U	ng/L	P416814	
		Pyridaben	2.4		ng/L	P416814	
		Pyriproxyfen	0.12	U	ng/L	P416814	
		Simazine	0.48	U	ng/L	P416814	
		Stirophos	0.12	U	ng/L	P416814	MS
		Sulfentrazone	0.48	U	ng/L	P416814	
		Tebuconazole	2.1		ng/L	P416814	
		Terbufos	0.095	U	ng/L	P416814	
		Terbutylazine	0.40	U	ng/L	P416814	
		Thiobencarb	0.57	U	ng/L	P416814	
		Triadimefon	0.24	U	ng/L	P416814	

Ref. Method and Comment:

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

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: MS accuracy for multiple parameters not assessed due to high content of these parameters in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P416736

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416747

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416808

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: P416808

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: P417113

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417116

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417312

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416986

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416972

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416886

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416745

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

Reference Method: EPA 8270E
Batch ID: P416814

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
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
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416814

Component	Result	Code	Units
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	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	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
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	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
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	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
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416814

Component	Result	Code	Units
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
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	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	2.5	U	ng/L
Metribuzin	2.5	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
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416814

Component	Result	Code	Units
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
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiatone	0.18	U	ng/L
Prodiatone	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
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	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
Stirophos	0.12	U	ng/L
Stirophos	0.12	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
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416814

Component	Result	Code	Units
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B

Batch ID: P416590

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: P416789

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P417081

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: P417148

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P417126

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P417087

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P417049

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P416736

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	95.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416747

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	94.9		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.2		P	85 - 115
Iron	104		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	101		P	85 - 115
Sodium	105		P	85 - 115
Strontium	101		P	85 - 115
Tin	96.1		P	85 - 115
Titanium	98.6		P	85 - 115
Vanadium	97.0		P	85 - 115
Zinc	93.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	102		P	85 - 115
Barium	103		P	85 - 115
Beryllium	91.0		P	85 - 115
Boron	104		P	85 - 115
Cadmium	98.2		P	85 - 115
Chromium	94.9		P	85 - 115
Cobalt	98.2		P	85 - 115
Copper	97.4		P	85 - 115
Lead	100		P	85 - 115
Manganese	94.9		P	85 - 115
Molybdenum	99.8		P	85 - 115
Nickel	100		P	85 - 115
Selenium	96.8		P	85 - 115
Silver	103		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417113

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417116

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417312

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416986

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: P416972

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	94.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416886

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416745

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

Reference Method: EPA 8270E
Batch ID: P416814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	104		P	50 - 150
Acetochlor	101		P	70 - 121
Alachlor	84.1		P	68 - 119
Ametryn	67.1		P	64 - 139
Atrazine	97.6		P	76 - 120
Atrazine Desethyl	65.1		P	44 - 126
Avobenzone	101		P	76 - 212
Azinphos Methyl	102		P	43 - 192
Azoxystrobin	110		P	36 - 224
Bromacil	84.6		P	52 - 121
Butylate	57.6		P	28 - 91.0
Caffeine	64.9		P	50 - 134
Carbophenothion	88.3		P	56 - 129
Carfentrazone Ethyl	83.1		P	60 - 141
Chlorfenapyr	81.2		P	56 - 115
Chlorpyrifos Ethyl	86.0		P	60 - 118

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P416814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Methyl	98.9		P	68 - 119
Coumaphos	94.9		P	18 - 250
Cyanazine	110		P	61 - 250
Cyprodinil	78.0		P	55 - 145
Demeton	81.6		P	30 - 159
Diazinon	91.5		P	70 - 123
Difenoconazole	129		P	49 - 204
Dimethenamid	89.4		P	64 - 115
Dimethomorph	112		P	12 - 219
Disulfoton	87.8		P	44 - 125
Dithiopyr	83.2		P	64 - 115
EPTC	42.3		P	28 - 86.0
Ethion	84.0		P	33 - 125
Ethoprop	92.9		P	64 - 116
Etridiazole	53.4		P	34 - 91.0
Fenamiphos	84.6		P	12 - 127
Fenbuconazole	91.0		P	59 - 151
Fipronil	88.2		P	67 - 129
Fipronil Desulfinyl	87.3		P	65 - 127
Fipronil Sulfide	85.3		P	61 - 116
Fipronil Sulfone	83.2		P	55 - 117
Fluazifop-P-butyl	96.7		P	62 - 127
Fludioxonil	100		P	62 - 128
Flumioxazin	136		P	33 - 250
Flutolanil	88.5		P	56 - 127
Fluxapyroxad	87.6		P	45 - 128
Fonofos	94.3		P	62 - 111
Hexazinone	97.9		P	46 - 139
Imazalil	92.0		P	38 - 142
Iprodione	100		P	47 - 135
Loratadine	95.9		P	10 - 244
Malathion	87.4		P	61 - 139
Metaxyl	79.1		P	10 - 119
Metolachlor	82.3		P	65 - 118
Metribuzin	83.7		P	51 - 250
Mevinphos	89.3		P	53 - 121
Molinate	77.3		P	42 - 96.0
Myclobutanil	83.8		P	55 - 128
Naled	85.0		P	10 - 98.0
Napropamide	80.5		P	49 - 121
Norflurazon	82.3		P	61 - 126
Octinoxate	99.0		P	30 - 159
Oxadiazon	77.2		P	59 - 116
Oxybenzone	80.4		P	61 - 139
Oxyfluorfen	116		P	64 - 137
Parathion Ethyl	88.7		P	70 - 112
Parathion Methyl	119		P	76 - 133
PBDE-47	90.0		P	50 - 150
PBDE-99	91.4		P	50 - 150
Pendimethalin	98.4		P	52 - 117
Phenytoin	25.8		P	10 - 199
Phorate	93.2		P	48 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P416814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prodiamine	37.6		P	26 - 142
Prometon	81.3		P	43 - 123
Prometryn	86.9		P	66 - 127
Pronamide	93.0		P	75 - 121
Propanil	115		P	45 - 150
Propargite	57.4		P	42 - 208
Propiconazole	77.8		P	60 - 125
Pyraflufen Ethyl	83.4		P	70 - 138
Pyridaben	80.3		P	35 - 245
Pyriproxyfen	82.0		P	30 - 149
Simazine	87.8		P	72 - 125
Stiophos	69.1		P	29 - 164
Sulfentrazone	113		P	21 - 139
Tebuconazole	53.6		P	10 - 115
Terbufos	103		P	60 - 123
Terbutylazine	88.0		P	72 - 115
Thiobencarb	72.0		P	31 - 139
Tri-o-cresyl Phosphate	96.8		P	50 - 150
Triadimefon	79.6		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P416590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	81.4		P	40 - 150
AMPA	118		P	40 - 150
Endothall	123		P	40 - 150
Glufosinate	155		F	40 - 150
Glyphosate	113		P	40 - 150
Sucralose	93.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	111		P	40 - 150
2,4,5-T	94.6		P	40 - 150
Acetaminophen	95.0		P	30 - 150
Acetamiprid	103		P	40 - 150
Afidopyropen	73.9		P	30 - 150
Bentazon	116		P	30 - 150
Benzovindiflupyr	96.4		P	40 - 150
Carbamazepine	95.8		P	40 - 150
Clothianidin	102		P	40 - 150
Dinotefuran	101		P	40 - 150
Diuron	88.1		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	98.4		P	40 - 150
Ibuprofen	89.9		P	40 - 150
Imazapyr	103		P	40 - 150
Imidacloprid	141		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P416789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	96.5		P	40 - 150
Mandestrobin	95.9		P	40 - 150
MCPPP	110		P	40 - 150
Naproxen	72.7		P	40 - 150
Primidone	106		P	40 - 150
Pyraclostrobin	86.4		P	40 - 150
Silvex	88.4		P	40 - 150
Thiamethoxam	98.5		P	40 - 150
Tolfenpyrad	57.9		P	30 - 150
Triclopyr	105		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P417081

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P417087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P417049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P416808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341367	Calcium	98.8		P	80 - 120
2341367	Iron	106	106	P/P	80 - 120
2341367	Magnesium	104	103	P/P	80 - 120
2341367	Potassium	109	109	P/P	80 - 120
2341367	Sodium	108	106	P/P	80 - 120
2341367	Strontium	102	101	P/P	80 - 120
2341367	Tin	93.8	93.0	P/P	80 - 120
2341367	Titanium	99.8	99.5	P/P	80 - 120
2341367	Vanadium	101	97.9	P/P	80 - 120
2341367	Zinc	92.4	91.3	P/P	80 - 120
2341368	Calcium	102		P	80 - 120
2341368	Iron	108		P	80 - 120
2341368	Magnesium	108		P	80 - 120
2341368	Potassium	106		P	80 - 120
2341368	Sodium	111		P	80 - 120
2341368	Strontium	105		P	80 - 120
2341368	Tin	96.9		P	80 - 120
2341368	Titanium	102		P	80 - 120
2341368	Vanadium	102		P	80 - 120
2341368	Zinc	94.5		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P416808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341367	Aluminum	109	104	P/P	80 - 120
2341367	Antimony	108	107	P/P	80 - 120
2341367	Arsenic	106	104	P/P	80 - 120
2341367	Barium	106	107	P/P	80 - 120
2341367	Beryllium	93.6	92.6	P/P	80 - 120
2341367	Boron	108	107	P/P	80 - 120
2341367	Cadmium	105	104	P/P	80 - 120
2341367	Chromium	97.5	98.6	P/P	80 - 120
2341367	Cobalt	98.7	97.7	P/P	80 - 120
2341367	Copper	99.1	97.4	P/P	80 - 120
2341367	Lead	103	103	P/P	80 - 120
2341367	Manganese	100	99.2	P/P	80 - 120
2341367	Molybdenum	106	105	P/P	80 - 120
2341367	Nickel	100	99.7	P/P	80 - 120
2341367	Selenium	100	101	P/P	80 - 120
2341367	Silver	107	105	P/P	80 - 120
2341367	Thallium	105	106	P/P	80 - 120
2341368	Aluminum	102		P	80 - 120
2341368	Antimony	110		P	80 - 120
2341368	Arsenic	105		P	80 - 120
2341368	Barium	108		P	80 - 120
2341368	Beryllium	96.7		P	80 - 120
2341368	Boron	104		P	80 - 120
2341368	Cadmium	103		P	80 - 120
2341368	Chromium	100		P	80 - 120
2341368	Cobalt	97.9		P	80 - 120
2341368	Copper	98.3		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P416808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341368	Lead	102		P	80 - 120
2341368	Manganese	101		P	80 - 120
2341368	Molybdenum	105		P	80 - 120
2341368	Nickel	99.0		P	80 - 120
2341368	Selenium	99.9		P	80 - 120
2341368	Silver	105		P	80 - 120
2341368	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P417113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341823	Chloride	101		P	90 - 110
2341978	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P417116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341823	Sulfate	101		P	90 - 110
2341978	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P417312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341915	Ammonia-N	97.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P416986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341953	Kjeldahl Nitrogen	103	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P416972

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341918	NO2NO3-N	96.1	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P416886

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341916	Total-P	99.0	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P416745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341954	O-Phosphate-P	98.9	98.7	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P416814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341420	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	94.0	95.7	P/P	50 - 150
2341420	Acetochlor	104	106	P/P	65 - 124
2341420	Alachlor	94.7	114	P/P	61 - 121
2341420	Ametryn	176	128	P/P	52 - 216
2341420	Atrazine	96.7	101	P/P	68 - 133
2341420	Atrazine Desethyl	33.0	19.8	P/P	15 - 160
2341420	Avobenzone	89.5	91.5	P/P	59 - 206
2341420	Azinphos Methyl	99.9	121	P/P	40 - 292
2341420	Azoxystrobin	133	140	P/P	12 - 242
2341420	Bromacil	80.9	113	P/P	54 - 167
2341420	Butylate	61.1	62.7	P/P	14 - 94.0
2341420	Caffeine	78.5	71.3	P/P	10 - 226
2341420	Carbophenothion	83.7	83.7	P/P	49 - 122
2341420	Carfentrazone Ethyl	110	101	P/P	53 - 138
2341420	Chlorfenapyr	73.1	69.1	P/P	50 - 150
2341420	Chlorpyrifos Ethyl	83.2	99.9	P/P	52 - 122
2341420	Chlorpyrifos Methyl	106	107	P/P	66 - 117
2341420	Coumaphos	80.5	83.1	P/P	50 - 220
2341420	Cyanazine	105	126	P/P	43 - 245
2341420	Cyprodinil	75.7	101	P/P	50 - 150
2341420	Demeton	84.8	102	P/P	43 - 188
2341420	Diazinon	108	102	P/P	69 - 131
2341420	Difenoconazole	116	118	P/P	34 - 231
2341420	Dimethenamid	89.4	92.5	P/P	55 - 118
2341420	Dimethomorph	131	144	P/P	50 - 150
2341420	Disulfoton	92.6	96.1	P/P	38 - 141
2341420	Dithiopyr	64.5	77.9	P/P	42 - 116
2341420	EPTC	33.6	36.3	P/P	18 - 85.0
2341420	Ethion	77.2	114	P/P	10 - 131
2341420	Ethoprop	108	114	P/P	65 - 129
2341420	Etridiazole	61.4	65.0	P/P	50 - 150
2341420	Fenamiphos	95.7	78.0	P/P	31 - 137
2341420	Fenbuconazole	82.1	110	P/P	57 - 160
2341420	Fipronil	79.3	121	P/P	62 - 132
2341420	Fipronil Desulfinyl	101	119	P/P	57 - 131
2341420	Fluazifop-P-butyl	106	103	P/P	54 - 133
2341420	Fludioxonil	82.2	102	P/P	58 - 127
2341420	Flumioxazin	126	121	P/P	33 - 300
2341420	Flutolanil	72.0	81.7	P/P	42 - 130
2341420	Fluxapyroxad	95.3	93.4	P/P	23 - 141
2341420	Fonofos	103	107	P/P	58 - 119
2341420	Hexazinone	121	119	P/P	68 - 172
2341420	Imazalil	95.0	87.5	P/P	48 - 283
2341420	Iprodione	74.4	100	P/P	38 - 140
2341420	Loratadine	113	128	P/P	50 - 150
2341420	Malathion	81.1	109	P/P	40 - 137
2341420	Metalaxyl	111	121	P/P	21 - 129
2341420	Metolachlor	85.6	98.0	P/P	55 - 122
2341420	Metribuzin	73.9	74.3	P/P	38 - 187
2341420	Mevinphos	101	115	P/P	54 - 134
2341420	Molinate	85.9	83.1	P/P	41 - 97.0
2341420	Myclobutanil	86.3	101	P/P	56 - 125

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P416814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341420	Naled	68.7	78.3	P/P	10 - 108
2341420	Napropamide	74.5	86.1	P/P	50 - 150
2341420	Norflurazon	72.6	89.9	P/P	32 - 122
2341420	Octinoxate	80.8	86.5	P/P	25 - 150
2341420	Oxadiazon	63.7	77.8	P/P	40 - 119
2341420	Oxybenzone	83.2	80.1	P/P	59 - 147
2341420	Oxyfluorfen	121	126	P/P	61 - 153
2341420	Parathion Ethyl	96.0	91.5	P/P	59 - 130
2341420	Parathion Methyl	137	120	P/P	65 - 155
2341420	PBDE-47	87.1	83.0	P/P	50 - 150
2341420	PBDE-99	85.0	80.8	P/P	50 - 150
2341420	Pendimethalin	120	122	P/P	49 - 138
2341420	Phenytoin	24.3	27.2	F/F	50 - 200
2341420	Phorate	104	126	P/P	54 - 161
2341420	Prodiamine	61.0	66.5	P/P	33 - 161
2341420	Prometon	80.8	101	P/P	48 - 140
2341420	Prometryn	67.9	75.1	P/P	55 - 134
2341420	Pronamide	96.4	91.6	P/P	66 - 137
2341420	Propanil	116	113	P/P	50 - 150
2341420	Propargite	61.0	66.7	P/P	50 - 200
2341420	Propiconazole	50.9	80.0	P/P	36 - 150
2341420	Pyraflufen Ethyl	87.5	86.8	P/P	50 - 150
2341420	Pyridaben	80.6	91.5	P/P	50 - 200
2341420	Pyriproxyfen	69.0	78.4	P/P	10 - 165
2341420	Simazine	89.1	88.4	P/P	57 - 145
2341420	Stirophos	27.3	29.8	F/F	50 - 150
2341420	Tebuconazole	23.0	50.8	P/P	10 - 127
2341420	Terbufos	121	125	P/P	59 - 138
2341420	Terbuthylazine	107	108	P/P	68 - 119
2341420	Thiobencarb	69.1	74.2	P/P	50 - 150
2341420	Tri-o-cresyl Phosphate	91.2	85.0	P/P	50 - 150
2341420	Triadimefon	76.7	87.5	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P416590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341960	Acesulfame K	84.3	84.3	P/P	40 - 150
2341960	AMPA	101	101	P/P	40 - 150
2341960	Endothall	122	121	P/P	40 - 150
2341960	Glufosinate	86.5	92.8	P/P	40 - 150
2341960	Glyphosate	86.1	87.6	P/P	40 - 150
2341960	Sucralose	92.1	91.7	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341960	2,4,5-T	94.1	77.6	P/P	40 - 150
2341960	Acetaminophen	116	110	P/P	30 - 150
2341960	Acetamiprid	89.2	83.7	P/P	40 - 150
2341960	Afidopyropen	85.7	83.8	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P416789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341960	Bentazon	105	92.6	P/P	30 - 150
2341960	Benzovindiflupyr	93.6	87.0	P/P	40 - 150
2341960	Carbamazepine	99.7	92.9	P/P	40 - 150
2341960	Clothianidin	121	110	P/P	40 - 150
2341960	Dinotefuran	137	136	P/P	40 - 150
2341960	Diuron	77.3	69.4	P/P	40 - 150
2341960	Fenuron	97.3	89.4	P/P	40 - 150
2341960	Fluridone	102	104	P/P	40 - 150
2341960	Hydrocodone	104	104	P/P	40 - 150
2341960	Ibuprofen	84.4	82.3	P/P	40 - 150
2341960	Imazapyr	103	94.7	P/P	40 - 150
2341960	Imidacloprid	150	141	F/P	40 - 150
2341960	Linuron	86.5	88.8	P/P	40 - 150
2341960	Mandestrobin	90.1	85.5	P/P	40 - 150
2341960	MCP	110	103	P/P	40 - 150
2341960	Naproxen	86.7	78.6	P/P	40 - 150
2341960	Primidone	120	115	P/P	40 - 150
2341960	Pyraclostrobin	87.1	84.5	P/P	40 - 150
2341960	Silvex	91.9	80.7	P/P	40 - 150
2341960	Thiamethoxam	133	126	P/P	40 - 150
2341960	Tolfenpyrad	58.2	57.2	P/P	30 - 150
2341960	Triclopyr	96.7	89.0	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P417087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342086	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P417049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2341979	Organic Carbon	94.8	96.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P416736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341978	Color (true)	2.40	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341789	Turbidity	3.07	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341367	Calcium	0.795	Spike	P	0 - 20
2341367	Iron	0.293	Spike	P	0 - 20
2341367	Magnesium	0.509	Spike	P	0 - 20
2341367	Potassium	0.102	Spike	P	0 - 20
2341367	Sodium	1.04	Spike	P	0 - 20
2341367	Strontium	0.885	Spike	P	0 - 20
2341367	Tin	0.897	Spike	P	0 - 20
2341367	Titanium	0.283	Spike	P	0 - 20
2341367	Vanadium	2.60	Spike	P	0 - 20
2341367	Zinc	1.12	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341367	Aluminum	3.83	Spike	P	0 - 20
2341367	Antimony	1.02	Spike	P	0 - 20
2341367	Arsenic	1.15	Spike	P	0 - 20
2341367	Barium	0.336	Spike	P	0 - 20
2341367	Beryllium	1.06	Spike	P	0 - 20
2341367	Boron	1.25	Spike	P	0 - 20
2341367	Cadmium	0.791	Spike	P	0 - 20
2341367	Chromium	1.03	Spike	P	0 - 20
2341367	Cobalt	1.01	Spike	P	0 - 20
2341367	Copper	1.69	Spike	P	0 - 20
2341367	Lead	0.256	Spike	P	0 - 20
2341367	Manganese	1.02	Spike	P	0 - 20
2341367	Molybdenum	0.565	Spike	P	0 - 20
2341367	Nickel	0.657	Spike	P	0 - 20
2341367	Selenium	0.568	Spike	P	0 - 20
2341367	Silver	1.29	Spike	P	0 - 20
2341367	Thallium	1.10	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341823	Chloride	0.210	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341823	Sulfate	0.404	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341915	Ammonia-N	1.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341953	Kjeldahl Nitrogen	4.70	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341918	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341916	Total-P	3.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341954	O-Phosphate-P	0.202	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P416814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341420	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	1.76	Spike	P	0 - 30
2341420	Acetochlor	2.13	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P416814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341420	Alachlor	18.9	Spike	P	0 - 27
2341420	Ametryn	31.4	Spike	P	0 - 34
2341420	Atrazine	2.64	Spike	P	0 - 41
2341420	Atrazine Desethyl	22.8	Spike	P	0 - 38
2341420	Avobenzone	2.14	Spike	P	0 - 30
2341420	Azinphos Methyl	18.8	Spike	P	0 - 62
2341420	Azoxystrobin	5.25	Spike	P	0 - 32
2341420	Bromacil	22.4	Spike	P	0 - 30
2341420	Butylate	2.53	Spike	P	0 - 59
2341420	Caffeine	8.70	Spike	P	0 - 60
2341420	Carbophenothion	0.0385	Spike	P	0 - 25
2341420	Carfentrazone Ethyl	8.55	Spike	P	0 - 26
2341420	Chlorfenapyr	5.55	Spike	P	0 - 30
2341420	Chlorpyrifos Ethyl	18.3	Spike	P	0 - 27
2341420	Chlorpyrifos Methyl	0.687	Spike	P	0 - 26
2341420	Coumaphos	3.26	Spike	P	0 - 30
2341420	Cyanazine	17.8	Spike	P	0 - 58
2341420	Cyprodinil	28.9	Spike	P	0 - 30
2341420	Demeton	18.8	Spike	P	0 - 25
2341420	Diazinon	5.10	Spike	P	0 - 29
2341420	Difenoconazole	1.78	Spike	P	0 - 25
2341420	Dimethenamid	3.40	Spike	P	0 - 30
2341420	Dimethomorph	9.22	Spike	P	0 - 30
2341420	Disulfoton	3.74	Spike	P	0 - 33
2341420	Dithiopyr	16.8	Spike	P	0 - 22
2341420	EPTC	7.47	Spike	P	0 - 38
2341420	Ethion	38.7	Spike	P	0 - 79
2341420	Ethoprop	5.41	Spike	P	0 - 23
2341420	Etridiazole	5.77	Spike	P	0 - 30
2341420	Fenamiphos	20.4	Spike	P	0 - 58
2341420	Fenbuconazole	29.0	Spike	P	0 - 37
2341420	Fipronil	29.4	Spike	P	0 - 33
2341420	Fipronil Desulfinyl	15.6	Spike	P	0 - 26
2341420	Fipronil Sulfide	33.9	Spike	P	0 - 37
2341420	Fipronil Sulfone	24.0	Spike	P	0 - 50
2341420	Fluazifop-P-butyl	2.95	Spike	P	0 - 24
2341420	Fludioxonil	21.8	Spike	P	0 - 26
2341420	Flumioxazin	3.66	Spike	P	0 - 37
2341420	Flutolanil	12.7	Spike	P	0 - 26
2341420	Fluxapyroxad	2.10	Spike	P	0 - 34
2341420	Fonofos	4.44	Spike	P	0 - 27
2341420	Hexazinone	1.54	Spike	P	0 - 36
2341420	Imazalil	8.19	Spike	P	0 - 65
2341420	Iprodione	29.9	Spike	P	0 - 33
2341420	Loratadine	12.7	Spike	P	0 - 30
2341420	Malathion	29.2	Spike	P	0 - 44
2341420	Metalaxyl	8.27	Spike	P	0 - 38
2341420	Metolachlor	13.5	Spike	P	0 - 36
2341420	Metribuzin	0.464	Spike	P	0 - 63
2341420	Mevinphos	13.7	Spike	P	0 - 26
2341420	Molinate	3.28	Spike	P	0 - 40

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P416814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341420	Myclobutanil	15.5	Spike	P	0 - 21
2341420	Naled	13.0	Spike	P	0 - 26
2341420	Napropamide	14.4	Spike	P	0 - 30
2341420	Norflurazon	21.3	Spike	P	0 - 24
2341420	Octinoxate	5.48	Spike	P	0 - 30
2341420	Oxadiazon	20.0	Spike	P	0 - 27
2341420	Oxybenzone	3.83	Spike	P	0 - 30
2341420	Oxyfluorfen	3.60	Spike	P	0 - 24
2341420	Parathion Ethyl	4.87	Spike	P	0 - 28
2341420	Parathion Methyl	13.3	Spike	P	0 - 27
2341420	PBDE-47	4.89	Spike	P	0 - 30
2341420	PBDE-99	5.05	Spike	P	0 - 30
2341420	Pendimethalin	1.32	Spike	P	0 - 31
2341420	Phenytoin	11.4	Spike	P	0 - 30
2341420	Phorate	18.6	Spike	P	0 - 27
2341420	Prodiamine	8.55	Spike	P	0 - 52
2341420	Prometon	22.1	Spike	P	0 - 31
2341420	Prometryn	10.1	Spike	P	0 - 28
2341420	Pronamide	5.13	Spike	P	0 - 26
2341420	Propanil	2.53	Spike	P	0 - 30
2341420	Propargite	8.97	Spike	P	0 - 30
2341420	Propiconazole	25.3	Spike	P	0 - 31
2341420	Pyraflufen Ethyl	0.794	Spike	P	0 - 30
2341420	Pyridaben	12.6	Spike	P	0 - 30
2341420	Pyriproxyfen	12.8	Spike	P	0 - 50
2341420	Simazine	0.752	Spike	P	0 - 29
2341420	Stirophos	8.76	Spike	P	0 - 30
2341420	Sulfentrazone	25.9	Spike	P	0 - 33
2341420	Tebuconazole	36.0	Spike	P	0 - 44
2341420	Terbufos	3.52	Spike	P	0 - 29
2341420	Terbuthylazine	0.176	Spike	P	0 - 27
2341420	Thiobencarb	7.14	Spike	P	0 - 30
2341420	Tri-o-cresyl Phosphate	6.93	Spike	P	0 - 30
2341420	Triadimefon	13.1	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P416590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341960	Acesulfame K	0.0195	Spike	P	0 - 30
2341960	AMPA	0.312	Spike	P	0 - 30
2341960	Endothall	1.50	Spike	P	0 - 30
2341960	Glufosinate	7.05	Spike	P	0 - 30
2341960	Glyphosate	1.72	Spike	P	0 - 30
2341960	Sucralose	0.321	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P416789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341960	2,4-D	9.74	Spike	P	0 - 30
2341960	2,4,5-T	19.2	Spike	P	0 - 30
2341960	Acetaminophen	5.68	Spike	P	0 - 30
2341960	Acetamiprid	6.36	Spike	P	0 - 30
2341960	Afidopyropen	2.21	Spike	P	0 - 30
2341960	Bentazon	9.87	Spike	P	0 - 30
2341960	Benzovindiflupyr	7.34	Spike	P	0 - 30
2341960	Carbamazepine	7.03	Spike	P	0 - 30
2341960	Clothianidin	9.52	Spike	P	0 - 30
2341960	Dinotefuran	1.19	Spike	P	0 - 30
2341960	Diuron	10.8	Spike	P	0 - 30
2341960	Fenuron	8.47	Spike	P	0 - 30
2341960	Fluridone	1.05	Spike	P	0 - 30
2341960	Hydrocodone	0.319	Spike	P	0 - 30
2341960	Ibuprofen	2.57	Spike	P	0 - 30
2341960	Imazapyr	7.78	Spike	P	0 - 30
2341960	Imidacloprid	6.37	Spike	P	0 - 30
2341960	Linuron	2.69	Spike	P	0 - 30
2341960	Mandestrobin	5.27	Spike	P	0 - 30
2341960	MCPP	6.98	Spike	P	0 - 30
2341960	Naproxen	9.78	Spike	P	0 - 30
2341960	Primidone	4.39	Spike	P	0 - 30
2341960	Pyraclostrobin	3.07	Spike	P	0 - 30
2341960	Silvex	13.1	Spike	P	0 - 30
2341960	Thiamethoxam	5.47	Spike	P	0 - 30
2341960	Tolfenpyrad	1.80	Spike	P	0 - 30
2341960	Triclopyr	8.32	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P417081

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342086	Total Alkalinity	1.82	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P417148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341591	TDS	3.84	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P417087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342086	Fluoride	0.476	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P417049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2341979	Organic Carbon	1.06	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2341960
Field Sample ID: G4CE0221

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.9	P	30 - 160
EPA 8321B	Diuron-d6	94.1	P	30 - 160
EPA 8321B	Endothall-d6	134	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.8	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	95.0	P	30 - 160

Lab Sample ID: 2341962
Field Sample ID: G4CE0221

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	92.2	P	20 - 200
EPA 8270E	Simazine-d10	123	P	71 - 140
EPA 8270E	Terbufos-d10	112	P	62 - 131
EPA 8270E	Terphenyl-d14	91.6	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A113535

Included Lab Sample IDs: 2341952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.5	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A113537

Included Lab Sample IDs: 2341954

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A113539

Included Lab Sample IDs: 2341952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.0	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A113571

Included Lab Sample IDs: 2341960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	118	99.8	P/P	60 - 160
Endothall	124	65.0	P/P	60 - 160
Glufosinate	105	75.5	P/P	60 - 160
Glyphosate	103	98.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A113572

Included Lab Sample IDs: 2341960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	85.1	87.8	P/P	60 - 160
Sucralose	94.7	94.2	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113594

Included Lab Sample IDs: 2341961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	101	P/P	90 - 110
Antimony	104	103	P/P	90 - 110
Arsenic	101	99.7	P/P	90 - 110
Barium	99.8	101	P/P	90 - 110
Beryllium	98.4	98.2	P/P	90 - 110
Boron	98.5	99.8	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	97.6	96.7	P/P	90 - 110
Cobalt	98.2	97.8	P/P	90 - 110
Copper	97.1	96.5	P/P	90 - 110
Lead	98.4	98.1	P/P	90 - 110
Manganese	98.4	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113594

Included Lab Sample IDs: 2341961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molybdenum	99.8	98.4	P/P	90 - 110
Nickel	98.2	97.7	P/P	90 - 110
Selenium	98.6	98.5	P/P	90 - 110
Silver	104	104	P/P	90 - 110
Thallium	99.0	97.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113634

Included Lab Sample IDs: 2341952

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113636

Included Lab Sample IDs: 2341953

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

Reference Method: EPA 8321B

Run ID: A113656

Included Lab Sample IDs: 2341960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.6	86.6	P/P	50 - 150
2,4,5-T	100	97.6	P/P	50 - 150
Acetaminophen	102	100	P/P	60 - 160
Acetamiprid	101	94.2	P/P	50 - 150
Afidopyropen	108	97.8	P/P	50 - 150
Bentazon	85.0	108	P/P	50 - 160
Benzovindiflupyr	104	96.8	P/P	50 - 150
Carbamazepine	96.8	97.6	P/P	60 - 150
Clothianidin	104	101	P/P	60 - 150
Dinotefuran	99.2	102	P/P	50 - 150
Diuron	108	110	P/P	60 - 160
Fenuron	98.9	96.3	P/P	60 - 150
Fluridone	112	106	P/P	60 - 160
Hydrocodone	96.2	97.6	P/P	60 - 150
Ibuprofen	95.2	96.3	P/P	50 - 160
Imazapyr	95.0	76.5	P/P	50 - 150
Imidacloprid	99.2	96.1	P/P	60 - 150
Linuron	94.5	91.7	P/P	60 - 150
Mandestrobin	98.2	102	P/P	50 - 150
MCPP	98.6	90.5	P/P	50 - 150
Naproxen	134	127	P/P	50 - 160
Primidone	107	106	P/P	60 - 150
Pyraclostrobin	96.0	95.5	P/P	60 - 150
Silvex	87.6	79.5	P/P	50 - 150
Thiamethoxam	97.8	99.1	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A113656
Included Lab Sample IDs: 2341960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	93.7	93.7	P/P	60 - 150
Triclopyr	95.1	87.3	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A113669
Included Lab Sample IDs: 2341953

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	97.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A113672
Included Lab Sample IDs: 2341961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	90 - 110
Iron	105	104	P/P	90 - 110
Magnesium	104	102	P/P	90 - 110
Potassium	104	102	P/P	90 - 110
Sodium	103	104	P/P	90 - 110
Strontium	102	102	P/P	90 - 110
Tin	96.5	96.5	P/P	90 - 110
Titanium	100	98.2	P/P	90 - 110
Vanadium	99.5	99.6	P/P	90 - 110
Zinc	95.5	93.1	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A113683
Included Lab Sample IDs: 2341952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.9	100	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A113683
Included Lab Sample IDs: 2341952

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A113693
Included Lab Sample IDs: 2341953

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113704

Included Lab Sample IDs: 2341953

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.6	96.9	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A113723

Included Lab Sample IDs: 2341962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	101		P	80 - 120
Avobenzene	98.6		P	80 - 120
Octinoxate	97.1		P	80 - 120
Oxybenzone	103		P	80 - 120
PBDE-47	97.8		P	80 - 120
PBDE-99	97.8		P	80 - 120
Tri-o-cresyl Phosphate	99.0		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113763

Included Lab Sample IDs: 2341953

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A113779

Included Lab Sample IDs: 2341962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	106		P	80 - 120
Alachlor	97.6		P	80 - 120
Ametryn	110		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	89.0		P	80 - 120
Azinphos Methyl	94.7		P	80 - 120
Azoxystrobin	95.5		P	80 - 120
Bromacil	109		P	80 - 120
Caffeine	94.6		P	80 - 120
Carbophenothion	99.0		P	80 - 120
Carfentrazone Ethyl	103		P	80 - 120
Chlorfenapyr	114		P	80 - 120
Chlorpyrifos Ethyl	101		P	80 - 120
Chlorpyrifos Methyl	111		P	80 - 120
Coumaphos	110		P	80 - 120
Cyanazine	95.9		P	80 - 120
Cyprodinil	104		P	80 - 120
Demeton	94.7		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	114		P	80 - 120
Dimethenamid	107		P	80 - 120
Dimethomorph	107		P	80 - 120
Disulfoton	98.6		P	80 - 120
Dithiopyr	110		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
Run ID: A113779
Included Lab Sample IDs: 2341962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
EPTC	101		P	80 - 120
Ethion	108		P	80 - 120
Ethoprop	102		P	80 - 120
Etridiazole	96.7		P	80 - 120
Fenamiphos	108		P	80 - 120
Fenbuconazole	103		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	114		P	80 - 120
Fipronil Sulfide	108		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	115		P	80 - 120
Fludioxonil	105		P	80 - 120
Flumioxazin	99.2		P	80 - 120
Flutolanil	107		P	80 - 120
Fluxapyroxad	96.4		P	80 - 120
Fonofos	92.0		P	80 - 120
Hexazinone	101		P	80 - 120
Imazalil	106		P	80 - 120
Iprodione	110		P	80 - 120
Loratadine	93.1		P	80 - 120
Malathion	104		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	110		P	80 - 120
Molinate	107		P	80 - 120
Myclobutanil	96.3		P	80 - 120
Naled	114		P	80 - 120
Napropamide	116		P	80 - 120
Norflurazon	98.8		P	80 - 120
Oxadiazon	99.0		P	80 - 120
Oxyfluorfen	96.9		P	80 - 120
Parathion Ethyl	89.3		P	80 - 120
Parathion Methyl	109		P	80 - 120
Pendimethalin	97.7		P	80 - 120
Phenytol	102		P	80 - 120
Phorate	98.5		P	80 - 120
Prodiamine	94.7		P	80 - 120
Prometon	118		P	80 - 120
Prometryn	114		P	80 - 120
Pronamide	98.3		P	80 - 120
Propanil	118		P	80 - 120
Propargite	96.0		P	80 - 120
Propiconazole	98.6		P	80 - 120
Pyraflufen Ethyl	119		P	80 - 120
Pyridaben	97.5		P	80 - 120
Pyriproxyfen	91.7		P	80 - 120
Simazine	94.6		P	80 - 120
Stirophos	119		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	99.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113779
Included Lab Sample IDs: 2341962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbufos	112		P	80 - 120
Terbutylazine	113		P	80 - 120
Thiobencarb	104		P	80 - 120
Triadimefon	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A113781
Included Lab Sample IDs: 2341962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Butylate	99.9		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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	95.2				2.40	
EPA 180.1 Rev. 2.0	Turbidity	94.9				3.07	
EPA 200.7 Rev. 4.4	Calcium	99.2	98.8	102			0.795
	Iron	104	106	106	108		0.293
	Magnesium	102	104	103	108		0.509
	Potassium	101	109	109	106		0.102
	Sodium	105	108	106	111		1.04
	Strontium	101	102	101	105		0.885
	Tin	96.1	93.8	93.0	96.9		0.897
	Titanium	98.6	99.8	99.5	102		0.283
	Vanadium	97.0	101	97.9	102		2.60
	Zinc	93.0	92.4	91.3	94.5		1.12
EPA 200.8 Rev. 5.4	Aluminum	101	109	104	102		3.83
	Antimony	103	108	107	110		1.02
	Arsenic	102	106	104	105		1.15
	Barium	103	106	107	108		0.336
	Beryllium	91.0	93.6	92.6	96.7		1.06
	Boron	104	108	107	104		1.25
	Cadmium	98.2	105	104	103		0.791
	Chromium	94.9	97.5	98.6	100		1.03
	Cobalt	98.2	98.7	97.7	97.9		1.01
	Copper	97.4	99.1	97.4	98.3		1.69
	Lead	100	103	103	102		0.256
	Manganese	94.9	100	99.2	101		1.02
	Molybdenum	99.8	106	105	105		0.565
	Nickel	100	100	99.7	99.0		0.657
	Selenium	96.8	100	101	99.9		0.568
	Silver	103	107	105	105		1.29
	Thallium	101	105	106	103		1.10
EPA 300.0 Rev. 2.1	Chloride	103	101	101		0.210	
	Sulfate	102	101	101		0.404	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	97.6	98.8			1.12
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	103	96.8			4.70
EPA 353.2 Rev. 2.0	NO2NO3-N	94.5	96.1	96.1			0.0
EPA 365.1 Rev. 2.0	Total-P	101	99.0	103			3.77
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.6	98.9	98.7			0.202
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	104	94.0	95.7			1.76
	Acetochlor	101	104	106			2.13
	Alachlor	84.1	94.7	114			18.9
	Ametryn	67.1	176	128			31.4
	Atrazine	97.6	96.7	101			2.64
	Atrazine Desethyl	65.1	33.0	19.8			22.8
	Avobenzone	101	89.5	91.5			2.14
	Azinphos Methyl	102	99.9	121			18.8
	Azoxystrobin	110	133	140			5.25
	Bromacil	84.6	80.9	113			22.4
	Butylate	57.6	61.1	62.7			2.53
	Caffeine	64.9	78.5	71.3			8.70
	Carbophenothion	88.3	83.7	83.7			0.0385
	Carfentrazone Ethyl	83.1	110	101			8.55
	Chlorfenapyr	81.2	73.1	69.1			5.55
	Chlorpyrifos Ethyl	86.0	83.2	99.9			18.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Chlorpyrifos Methyl	98.9	106	107			0.687
	Coumaphos	94.9	80.5	83.1			3.26
	Cyanazine	110	105	126			17.8
	Cyprodinil	78.0	75.7	101			28.9
	Demeton	81.6	84.8	102			18.8
	Diazinon	91.5	108	102			5.10
	Difenoconazole	129	116	118			1.78
	Dimethenamid	89.4	89.4	92.5			3.40
	Dimethomorph	112	131	144			9.22
	Disulfoton	87.8	92.6	96.1			3.74
	Dithiopyr	83.2	64.5	77.9			16.8
	EPTC	42.3	33.6	36.3			7.47
	Ethion	84.0	77.2	114			38.7
	Ethoprop	92.9	108	114			5.41
	Etridiazole	53.4	61.4	65.0			5.77
	Fenamiphos	84.6	95.7	78.0			20.4
	Fenbuconazole	91.0	82.1	110			29.0
	Fipronil	88.2	79.3	121			29.4
	Fipronil Desulfinyl	87.3	101	119			15.6
	Fipronil Sulfide	85.3					33.9
	Fipronil Sulfone	83.2					24.0
	Fluazifop-P-butyl	96.7	106	103			2.95
	Fludioxonil	100	82.2	102			21.8
	Flumioxazin	136	126	121			3.66
	Flutolanil	88.5	72.0	81.7			12.7
	Fluxapyroxad	87.6	95.3	93.4			2.10
	Fonofos	94.3	103	107			4.44
	Hexazinone	97.9	121	119			1.54
	Imazalil	92.0	95.0	87.5			8.19
	Iprodione	100	74.4	100			29.9
	Loratadine	95.9	113	128			12.7
	Malathion	87.4	81.1	109			29.2
	Metalaxyl	79.1	111	121			8.27
	Metolachlor	82.3	85.6	98.0			13.5
	Metribuzin	83.7	73.9	74.3			0.464
	Mevinphos	89.3	101	115			13.7
	Molinate	77.3	85.9	83.1			3.28
	Myclobutanil	83.8	86.3	101			15.5
	Naled	85.0	68.7	78.3			13.0
	Napropamide	80.5	74.5	86.1			14.4
	Norflurazon	82.3	72.6	89.9			21.3
	Octinoxate	99.0	80.8	86.5			5.48
	Oxadiazon	77.2	63.7	77.8			20.0
	Oxybenzone	80.4	83.2	80.1			3.83
	Oxyfluorfen	116	121	126			3.60
	Parathion Ethyl	88.7	96.0	91.5			4.87
	Parathion Methyl	119	137	120			13.3
	PBDE-47	90.0	87.1	83.0			4.89
	PBDE-99	91.4	85.0	80.8			5.05
	Pendimethalin	98.4	120	122			1.32
	Phenytol	25.8	24.3	27.2			11.4
	Phorate	93.2	104	126			18.6
	Prodiamine	37.6	61.0	66.5			8.55
	Prometon	81.3	80.8	101			22.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Prometryn	86.9	67.9	75.1			10.1
	Pronamide	93.0	96.4	91.6			5.13
	Propanil	115	116	113			2.53
	Propargite	57.4	61.0	66.7			8.97
	Propiconazole	77.8	50.9	80.0			25.3
	Pyraflufen Ethyl	83.4	87.5	86.8			0.794
	Pyridaben	80.3	80.6	91.5			12.6
	Pyriproxyfen	82.0	69.0	78.4			12.8
	Simazine	87.8	89.1	88.4			0.752
	Stirophos	69.1	27.3	29.8			8.76
	Sulfentrazone	113					25.9
	Tebuconazole	53.6	23.0	50.8			36.0
	Terbufos	103	121	125			3.52
	Terbuthylazine	88.0	107	108			0.176
	Thiobencarb	72.0	69.1	74.2			7.14
	Tri-o-cresyl Phosphate	96.8	91.2	85.0			6.93
	Triadimefon	79.6	76.7	87.5			13.1
EPA 8321B	2,4-D	111					9.74
	2,4,5-T	94.6	94.1	77.6			19.2
	Acesulfame K	81.4	84.3	84.3			0.0195
	Acetaminophen	95.0	116	110			5.68
	Acetamiprid	103	89.2	83.7			6.36
	Afidopyropen	73.9	85.7	83.8			2.21
	AMPA	118	101	101			0.312
	Bentazon	116	105	92.6			9.87
	Benzovindiflupyr	96.4	93.6	87.0			7.34
	Carbamazepine	95.8	99.7	92.9			7.03
	Clothianidin	102	121	110			9.52
	Dinotefuran	101	137	136			1.19
	Diuron	88.1	77.3	69.4			10.8
	Endothall	123	122	121			1.50
	Fenuron	108	97.3	89.4			8.47
	Fluridone	102	102	104			1.05
	Glufosinate	155	86.5	92.8			7.05
	Glyphosate	113	86.1	87.6			1.72
	Hydrocodone	98.4	104	104			0.319
	Ibuprofen	89.9	84.4	82.3			2.57
	Imazapyr	103	103	94.7			7.78
	Imidacloprid	141	150	141			6.37
	Linuron	96.5	86.5	88.8			2.69
	Mandestrobin	95.9	90.1	85.5			5.27
	MCPP	110	110	103			6.98
	Naproxen	72.7	86.7	78.6			9.78
	Primidone	106	120	115			4.39
	Pyraclostrobin	86.4	87.1	84.5			3.07
	Silvex	88.4	91.9	80.7			13.1
	Sucralose	93.6	92.1	91.7			0.321
	Thiamethoxam	98.5	133	126			5.47
	Tolfenpyrad	57.9	58.2	57.2			1.80
	Triclopyr	105	96.7	89.0			8.32
SM 2320 B-2011	Total Alkalinity	101				1.82	
SM 2540 C-2011	TDS					3.84	
SM 4500-F- C-2011	Fluoride	101	101	100			0.476
SM 5310 B-2011	Organic Carbon	97.3	94.8	96.4			1.06

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2341952
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2341952
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2341961
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2341961
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2341952
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2341952
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2341953
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2341953
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2341953
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2341953
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2341954
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2341962
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2341962
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2341960
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2341952
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2341961
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2341952
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2341952
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2341952
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2341953

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/15/2022			07/15/2022 13:50	Samantha L Bates	2341952
EPA 180.1 Rev. 2.0	07/15/2022			07/15/2022 13:31	Anna M. Plaviak	2341952
EPA 200.7 Rev. 4.4	07/15/2022	07/19/2022 09:28	Megan Whitefoot	07/23/2022 03:27	McKinley C Carter	2341961
EPA 200.8 Rev. 5.4	07/15/2022	07/19/2022 09:28	Megan Whitefoot	07/19/2022 21:47	Alexander Thompson	2341961
EPA 300.0 Rev. 2.1	07/15/2022			07/22/2022 04:15	James L Waggeberby	2341952
EPA 350.1 Rev. 2.0	07/15/2022			07/28/2022 10:42	Ping Hua	2341953
EPA 351.2 Rev. 2.0	07/15/2022	07/25/2022 12:53	Simonne.V. Calhoun	07/26/2022 10:50	Samantha L Bates	2341953
EPA 353.2 Rev. 2.0	07/15/2022			07/21/2022 10:33	Beverly Y. Sanders	2341953
EPA 365.1 Rev. 2.0	07/15/2022	07/21/2022 15:53	Adam P Silver	07/25/2022 14:20	James L Waggeberby	2341953
EPA 365.1 Rev. 2.0 dissolved	07/15/2022			07/15/2022 14:25	Chandler E Cox	2341954
EPA 8270E	07/15/2022	07/20/2022 08:15	Rasheda Ghaffari	07/24/2022 21:40	Michael Poppell	2341962
	07/15/2022	07/20/2022 08:15	Rasheda Ghaffari	07/26/2022 16:17	Lipi Saha	2341962
	07/15/2022	07/20/2022 08:15	Rasheda Ghaffari	07/28/2022 20:05	Michael Poppell	2341962
EPA 8321B	07/15/2022	07/18/2022 10:10	Umesh Chiluwal	07/18/2022 11:23	Umesh Chiluwal	2341960
	07/15/2022	07/18/2022 10:10	Umesh Chiluwal	07/19/2022 03:31	Umesh Chiluwal	2341960
	07/15/2022	07/19/2022 09:00	June Rhew	07/21/2022 21:02	Juyoung Kim	2341960
SM 2320 B-2011	07/15/2022			07/23/2022 06:58	Dale L. Simmons	2341952
SM 2340 B-2011	07/15/2022			07/23/2022 03:27	McKinley C Carter	2341961
SM 2540 C-2011	07/15/2022			07/19/2022 15:12	Yijie Li	2341952
SM 2540 D-2011	07/15/2022			07/19/2022 15:12	Yijie Li	2341952
SM 4500-F- C-2011	07/15/2022			07/23/2022 06:58	Dale L. Simmons	2341952
SM 5310 B-2011	07/15/2022			07/22/2022 06:57	Touraj Touran	2341953