Chemical Analysis Report

TLH-ROC-2022-05-04-02

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

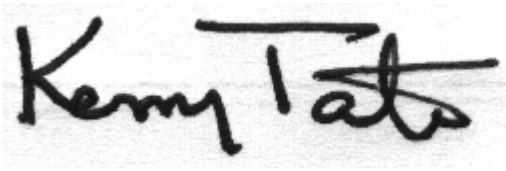
Event Description: **SCI Kits**
Request ID: **RQ-2022-01-03-58**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 26-MAY-2022 09:24



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 KILLARNEY **Collection Date/Time: 05/04/2022 10:25**

Field ID: G1TLHR0166 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324747	DEP SOP: NU-094-1	Color (true)**	39		PCU	P413448	
	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P413437	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P413635	
		Sulfate	0.20	U	mg SO4/L	P413637	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P413845	
	SM 2540 C-2011	TDS	51		mg/L	P413945	
	SM 2540 D-2011	TSS	5	I	mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.052	I	mg F/L	P413847	
2324748	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P413702	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P414005	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P413633	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P414054	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P413752	
2324749	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P413429	
2324752	EPA 8321B	2,4-D	0.51		ug/L	P413414	
		Acesulfame K	0.10	U	ug/L	P413320	
		2,4,5-T	0.0040	U	ug/L	P413414	
		AMPA	0.10	U	ug/L	P413320	
		Acetaminophen	0.0080	U	ug/L	P413414	
		Acetamiprid	0.0020	U	ug/L	P413414	
		Endothall	0.25	U	ug/L	P413320	
		Glufosinate	0.10	U	ug/L	P413320	
		Glyphosate	0.10	U	ug/L	P413320	
		Afidopyropen	0.0020	U	ug/L	P413414	
		Bentazon	8.0E-04	U	ug/L	P413414	
		Sucralose	0.068		ug/L	P413320	
		Benzovindiflupyr	0.0020	U	ug/L	P413414	
		Carbamazepine	8.0E-04	U	ug/L	P413414	
		Clothianidin	0.0020	U	ug/L	P413414	
		Dinotefuran	0.0020	U	ug/L	P413414	
		Diuron	0.0020	U	ug/L	P413414	
		Fenuron	0.032	U	ug/L	P413414	
		Fluridone	0.0073		ug/L	P413414	
		Imazapyr	0.0040	U	ug/L	P413414	
		Hydrocodone	0.0020	U	ug/L	P413414	
		Ibuprofen	0.020	U	ug/L	P413414	
		Imidacloprid	0.0020	U	ug/L	P413414	
		Linuron	0.0040	U	ug/L	P413414	
		Mandestrobin	0.0020	U	ug/L	P413414	
		MCPP	0.0052	I	ug/L	P413414	
		Naproxen	0.0080	U	ug/L	P413414	
		Primidone	0.0040	U	ug/L	P413414	
		Pyraclostrobin	0.0020	U	ug/L	P413414	

Field ID: G1TLHR0166 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324752	EPA 8321B	Silvex	0.0040	U	ug/L	P413414	
		Thiamethoxam	0.0020	U	ug/L	P413414	
		Tolfenpyrad	0.0020	U	ug/L	P413414	
		Triclopyr	0.0040	U	ug/L	P413414	
2324753	EPA 200.7 Rev. 4.4	Calcium	7.34		mg/L	P413453	
		Iron	950		ug/L	P413453	
		Magnesium	2.75		mg/L	P413453	
		Potassium	0.93	I	mg/L	P413453	
		Sodium	2.7		mg/L	P413453	
		Strontium	16.3		ug/L	P413453	
		Tin	3.0	U	ug/L	P413453	
		Titanium	0.75	U	ug/L	P413453	
		Vanadium	2.0	U	ug/L	P413453	
		Zinc	5.0	U	ug/L	P413453	
	EPA 200.8 Rev. 5.4	Aluminum	11	I	ug/L	P413453	
		Antimony	0.050	U	ug/L	P413453	
		Arsenic	0.77		ug/L	P413453	
		Barium	9.95		ug/L	P413453	
		Beryllium	0.010	U	ug/L	P413453	
		Boron**	10.6		ug/L	P413453	
		Cadmium	0.020	U	ug/L	P413453	
		Chromium	0.40	U	ug/L	P413453	
		Cobalt	0.045	I	ug/L	P413453	
		Copper	0.40	U	ug/L	P413453	
		Lead	0.20	U	ug/L	P413453	
		Manganese	66.8		ug/L	P413453	
		Molybdenum	0.15	U	ug/L	P413453	
		Nickel	0.50	U	ug/L	P413453	
		Selenium	0.20	U	ug/L	P413453	
		Silver	0.010	U	ug/L	P413453	
		Thallium	0.10	U	ug/L	P413453	
	SM 2340 B-2011	Hardness	29.7		mg/L	P413453	
2324754	EPA 8270E	Acetochlor	0.24	U	ng/L	P413451	
		Alachlor	0.24	U	ng/L	P413451	
		Ametryn	0.59	U	ng/L	P413451	
		Atrazine	300		ng/L	P413451	
		Atrazine Desethyl	28		ng/L	P413451	
		Azinphos Methyl	2.0	U	ng/L	P413451	
		Azoxystrobin**	0.49	U	ng/L	P413451	
		Bromacil	0.49	U	ng/L	P413451	
		Butylate	0.39	U	ng/L	P413451	
		Caffeine**	7.3	U	ng/L	P413451	
		Carbophenothion	0.20	U	ng/L	P413451	
		Carfentrazone Ethyl**	0.098	UJ	ng/L	P413451	CCV
		Chlorfenapyr**	0.17	U	ng/L	P413451	

Field ID: G1TLHR0166 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324754	EPA 8270E	Chlorpyrifos Ethyl	0.24	U	ng/L	P413451	
		Chlorpyrifos Methyl	0.049	U	ng/L	P413451	
		Coumaphos**	0.49	UJ	ng/L	P413451	CCV
		Cyanazine	3.2	U	ng/L	P413451	
		Cyprodinil**	0.098	U	ng/L	P413451	
		Demeton	1.5	U	ng/L	P413451	
		Diazinon	0.12	U	ng/L	P413451	
		Difenoconazole**	0.59	U	ng/L	P413451	
		Dimethenamid**	0.098	U	ng/L	P413451	
		Dimethomorph**	0.17	U	ng/L	P413451	
		Disulfoton	0.49	U	ng/L	P413451	
		Dithiopyr**	0.40	I	ng/L	P413451	
		EPTC	1.2	U	ng/L	P413451	
		Ethion	0.15	U	ng/L	P413451	
		Ethoprop	0.098	U	ng/L	P413451	
		Etridiazole**	0.15	U	ng/L	P413451	
		Fenamiphos	0.49	U	ng/L	P413451	
		Fenbuconazole**	0.12	U	ng/L	P413451	
		Fipronil	0.29	I	ng/L	P413451	
		Fipronil Desulfinyl**	0.72		ng/L	P413451	
		Fipronil Sulfide	0.58	I	ng/L	P413451	
		Fipronil Sulfone	0.98		ng/L	P413451	
		Fluazifop-P-butyl**	0.098	U	ng/L	P413451	
		Fludioxonil**	0.12	U	ng/L	P413451	
		Flumioxazin**	1.7	U	ng/L	P413451	
		Flutolanil**	0.098	U	ng/L	P413451	
		Fluxapyroxad**	0.098	U	ng/L	P413451	
		Fonofos	0.20	U	ng/L	P413451	
		Hexazinone	0.49	U	ng/L	P413451	
		Imazalil**	0.73	U	ng/L	P413451	
		Iprodione**	0.59	U	ng/L	P413451	
		Loratadine**	0.098	U	ng/L	P413451	
		Malathion	0.34	U	ng/L	P413451	
		Metalaxyl	0.73	U	ng/L	P413451	
		Metolachlor	0.34	U	ng/L	P413451	
		Metribuzin	2.4	U	ng/L	P413451	
		Mevinphos	1.0	U	ng/L	P413451	
		Molinate	0.29	U	ng/L	P413451	
		Myclobutanil**	0.24	U	ng/L	P413451	
		Naled**	1.5	U	ng/L	P413451	
		Napropamide**	0.39	U	ng/L	P413451	
		Norflurazon	0.49	U	ng/L	P413451	
		Oxadiazon	0.34	I	ng/L	P413451	
		Oxyfluorfen**	0.15	U	ng/L	P413451	
		Parathion Ethyl	0.24	U	ng/L	P413451	

Field ID: G1TLHR0166 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324754	EPA 8270E	Parathion Methyl	0.54	U	ng/L	P413451	
		Pendimethalin	0.98	U	ng/L	P413451	
		Phenytoin**	3.4	UJ	ng/L	P413451	CCV
		Phorate	0.51	U	ng/L	P413451	
		Prodiamine**	0.17	U	ng/L	P413451	
		Prometon	0.88	U	ng/L	P413451	
		Prometryn	0.20	U	ng/L	P413451	
		Pronamide**	0.15	U	ng/L	P413451	
		Propanil**	0.12	U	ng/L	P413451	
		Propargite**	1.5	U	ng/L	P413451	
		Propiconazole**	1.1	I	ng/L	P413451	
		Pyraflufen Ethyl**	0.24	U	ng/L	P413451	
		Pyridaben**	0.44	U	ng/L	P413451	
		Pyriproxyfen**	0.12	U	ng/L	P413451	
		Simazine	60	J	ng/L	P413451	LCS
		Stirophos**	0.12	U	ng/L	P413451	
		Sulfentrazone**	0.89	I	ng/L	P413451	
		Tebuconazole**	0.53	I J	ng/L	P413451	CCV
		Terbufos	0.098	U	ng/L	P413451	
		Terbuthylazine	0.42	U	ng/L	P413451	
		Thiobencarb**	0.59	U	ng/L	P413451	
		Triadimefon**	0.24	U	ng/L	P413451	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P413448

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

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: P413453

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: P413635

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: P413637

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413702

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

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

Reference Method: EPA 8270E
Batch ID: P413451

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413451

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413451

Component	Result	Code	Units
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
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	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
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
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P413451

Component	Result	Code	Units
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
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
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B
Batch ID: P413320

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P413414

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	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
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: P413845

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

Reference Method: SM 2540 C-2011
Batch ID: P413945

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P413947

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P413847

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P413752

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: P413448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.3		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Strontium	103		P	85 - 115
Tin	104		P	85 - 115
Titanium	104		P	85 - 115
Vanadium	98.6		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	80 - 120
Antimony	101		P	80 - 120
Arsenic	99.4		P	80 - 120
Barium	105		P	80 - 120
Beryllium	101		P	80 - 120
Boron	105		P	80 - 120
Cadmium	99.9		P	80 - 120
Chromium	99.8		P	80 - 120
Cobalt	98.6		P	80 - 120
Copper	98.0		P	80 - 120
Lead	102		P	80 - 120
Manganese	99.8		P	80 - 120
Molybdenum	99.1		P	80 - 120
Nickel	99.2		P	80 - 120
Selenium	101		P	80 - 120
Silver	96.6		P	80 - 120
Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.7		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413702

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

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

Reference Method: EPA 8270E
Batch ID: P413451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.0		P	70 - 121
Alachlor	86.3		P	68 - 119
Ametryn	128		P	64 - 139
Atrazine	88.9		P	76 - 120
Atrazine Desethyl	57.0		P	44 - 126
Azinphos Methyl	71.9		P	43 - 192
Azoxystrobin	86.2		P	36 - 224
Bromacil	52.0		P	52 - 121
Butylate	43.2		P	28 - 91.0
Caffeine	81.3		P	50 - 134
Carbophenothion	77.3		P	56 - 129
Carfentrazone Ethyl	66.8		P	60 - 141
Chlorfenapyr	64.0		P	56 - 115
Chlorpyrifos Ethyl	78.8		P	60 - 118
Chlorpyrifos Methyl	73.0		P	68 - 119
Coumaphos	53.7		P	18 - 250

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P413451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	91.4		P	61 - 250
Cyprodinil	86.6		P	55 - 145
Demeton	79.9		P	30 - 159
Diazinon	87.1		P	70 - 123
Difenoconazole	54.1		P	49 - 204
Dimethenamid	74.9		P	64 - 115
Dimethomorph	188		P	12 - 219
Disulfoton	75.2		P	44 - 125
Dithiopyr	81.7		P	64 - 115
EPTC	50.4		P	28 - 86.0
Ethion	36.1		P	33 - 125
Ethoprop	81.7		P	64 - 116
Etridiazole	56.7		P	34 - 91.0
Fenamiphos	58.4		P	12 - 127
Fenbuconazole	62.5		P	59 - 151
Fipronil	77.0		P	67 - 129
Fipronil Desulfinyl	75.9		P	65 - 127
Fipronil Sulfide	64.9		P	61 - 116
Fipronil Sulfone	55.2		P	55 - 117
Fluazifop-P-butyl	66.1		P	62 - 127
Fludioxonil	72.8		P	62 - 128
Flumioxazin	49.3		P	33 - 250
Flutolanil	63.2		P	56 - 127
Fluxapyroxad	54.5		P	45 - 128
Fonofos	72.6		P	62 - 111
Hexazinone	69.9		P	46 - 139
Imazalil	106		P	38 - 142
Iprodione	62.4		P	47 - 135
Loratadine	179		P	10 - 244
Malathion	76.4		P	61 - 139
Metalaxyl	76.2		P	10 - 119
Metolachlor	79.0		P	65 - 118
Metribuzin	77.9		P	51 - 250
Mevinphos	65.0		P	53 - 121
Molinate	64.3		P	42 - 96.0
Myclobutanil	73.3		P	55 - 128
Naled	81.4		P	10 - 98.0
Napropamide	60.6		P	49 - 121
Norflurazon	64.1		P	61 - 126
Oxyfluorfen	77.2		P	64 - 137
Parathion Ethyl	78.9		P	70 - 112
Parathion Methyl	110		P	76 - 133
Pendimethalin	89.0		P	52 - 117
Phenytoin	10.6		P	10 - 199
Phorate	76.3		P	48 - 121
Prodiamine	38.5		P	26 - 142
Prometon	45.2		P	43 - 123
Prometryn	68.4		P	66 - 127
Pronamide	93.5		P	75 - 121
Propanil	68.0		P	45 - 150
Propargite	130		P	42 - 208
Propiconazole	100		P	60 - 125

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P413451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraflufen Ethyl	92.3		P	70 - 138
Pyridaben	46.8		P	35 - 245
Pyriproxyfen	53.8		P	30 - 149
Simazine	71.1		F	72 - 125
Stirophos	38.2		P	29 - 164
Sulfentrazone	28.8		P	21 - 139
Tebuconazole	36.5		P	10 - 115
Terbufos	98.4		P	60 - 123
Terbuthylazine	92.2		P	72 - 115
Thiobencarb	71.8		P	31 - 139
Triadimefon	73.3		P	65 - 116

Reference Method: EPA 8321B
Batch ID: P413320

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	90.6		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	93.5		P	40 - 150
Glyphosate	92.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P413414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.4		P	40 - 150
2,4,5-T	90.3		P	40 - 150
Acetaminophen	82.1		P	30 - 150
Acetamiprid	77.2		P	40 - 150
Afidopyropen	68.5		P	30 - 150
Bentazon	106		P	30 - 150
Benzovindiflupyr	82.5		P	40 - 150
Carbamazepine	79.2		P	40 - 150
Clothianidin	111		P	40 - 150
Dinotefuran	115		P	40 - 150
Diuron	89.4		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	81.2		P	40 - 150
Hydrocodone	99.8		P	40 - 150
Ibuprofen	78.3		P	40 - 150
Imazapyr	111		P	40 - 150
Imidacloprid	96.8		P	40 - 150
Linuron	73.6		P	40 - 150
Mandestrobin	79.2		P	40 - 150
MCPP	135		P	40 - 150
Naproxen	61.1		P	40 - 150
Primidone	108		P	40 - 150
Pyraclostrobin	73.5		P	40 - 150
Silvex	105		P	40 - 150
Thiamethoxam	100		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P413414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	57.2		P	30 - 150
Triclopyr	94.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P413845

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.9		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P413847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P413752

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324875	Calcium	107		P	80 - 120
2324875	Iron	112	110	P/P	80 - 120
2324875	Magnesium	113	110	P/P	80 - 120
2324875	Potassium	107	107	P/P	80 - 120
2324875	Sodium	110	108	P/P	80 - 120
2324875	Strontium	109	107	P/P	80 - 120
2324875	Tin	113	108	P/P	80 - 120
2324875	Titanium	111	108	P/P	80 - 120
2324875	Vanadium	107	103	P/P	80 - 120
2324875	Zinc	104	99.5	P/P	80 - 120
2324891	Calcium	111		P	80 - 120
2324891	Iron	111		P	80 - 120
2324891	Magnesium	112		P	80 - 120
2324891	Potassium	110		P	80 - 120
2324891	Sodium	112		P	80 - 120
2324891	Strontium	109		P	80 - 120
2324891	Tin	110		P	80 - 120
2324891	Titanium	110		P	80 - 120
2324891	Vanadium	103		P	80 - 120
2324891	Zinc	110		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324875	Aluminum	94.7	113	P/P	80 - 120
2324875	Antimony	99.6	101	P/P	80 - 120
2324875	Arsenic	96.1	99.0	P/P	80 - 120
2324875	Barium	103	109	P/P	80 - 120
2324875	Beryllium	94.6	96.4	P/P	80 - 120
2324875	Boron	102	108	P/P	80 - 120
2324875	Cadmium	98.8	102	P/P	80 - 120
2324875	Chromium	102	106	P/P	80 - 120
2324875	Cobalt	95.9	99.3	P/P	80 - 120
2324875	Copper	96.3	98.8	P/P	80 - 120
2324875	Lead	99.5	105	P/P	80 - 120
2324875	Manganese	101	110	P/P	80 - 120
2324875	Molybdenum	98.8	102	P/P	80 - 120
2324875	Nickel	97.4	100	P/P	80 - 120
2324875	Selenium	96.2	97.8	P/P	80 - 120
2324875	Silver	96.6	99.1	P/P	80 - 120
2324875	Thallium	99.6	106	P/P	80 - 120
2324891	Aluminum	99.7		P	80 - 120
2324891	Antimony	98.8		P	80 - 120
2324891	Arsenic	98.0		P	80 - 120
2324891	Barium	103		P	80 - 120
2324891	Beryllium	97.6		P	80 - 120
2324891	Boron	99.2		P	80 - 120
2324891	Cadmium	96.7		P	80 - 120
2324891	Chromium	98.4		P	80 - 120
2324891	Cobalt	96.1		P	80 - 120
2324891	Copper	96.4		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324891	Lead	101		P	80 - 120
2324891	Manganese	97.9		P	80 - 120
2324891	Molybdenum	97.6		P	80 - 120
2324891	Nickel	94.9		P	80 - 120
2324891	Selenium	97.1		P	80 - 120
2324891	Silver	95.0		P	80 - 120
2324891	Thallium	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Chloride	97.1		P	90 - 110
2324445	Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Sulfate	98.4		P	90 - 110
2324445	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325150	Ammonia-N	98.4	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324748	Kjeldahl Nitrogen	96.4	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324757	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414054

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327259	Total-P	103	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324749	O-Phosphate-P	97.2	98.2	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P413451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325087	Acetochlor	92.2	91.3	P/P	65 - 124
2325087	Alachlor	99.5	93.6	P/P	61 - 121
2325087	Ametryn	82.5	66.8	P/P	52 - 216
2325087	Atrazine Desethyl	46.5	58.9	P/P	15 - 160
2325087	Azinphos Methyl	108	102	P/P	40 - 292
2325087	Azoxystrobin	127	143	P/P	12 - 242
2325087	Bromacil	73.2	80.0	P/P	54 - 167
2325087	Butylate	48.3	45.8	P/P	14 - 94.0
2325087	Caffeine	73.8	82.6	P/P	10 - 226
2325087	Carbophenothion	80.9	77.6	P/P	49 - 122
2325087	Carfentrazone Ethyl	74.1	72.9	P/P	53 - 138
2325087	Chlorfenapyr	64.7	69.7	P/P	50 - 150
2325087	Chlorpyrifos Ethyl	84.4	85.2	P/P	52 - 122
2325087	Chlorpyrifos Methyl	93.6	109	P/P	66 - 117
2325087	Coumaphos	58.6	65.0	P/P	50 - 220
2325087	Cyanazine	98.3	125	P/P	43 - 245
2325087	Cyprodinil	101	106	P/P	50 - 150
2325087	Demeton	101	124	P/P	43 - 188
2325087	Diazinon	92.4	116	P/P	69 - 131
2325087	Difenoconazole	104	87.9	P/P	34 - 231
2325087	Dimethenamid	68.6	80.4	P/P	55 - 118
2325087	Dimethomorph	67.7	84.7	P/P	50 - 150
2325087	Disulfoton	69.4	84.9	P/P	38 - 141
2325087	Dithiopyr	78.1	93.7	P/P	42 - 116
2325087	EPTC	37.9	51.8	P/P	18 - 85.0
2325087	Ethion	47.4	29.1	P/P	10 - 131
2325087	Ethoprop	88.7	103	P/P	65 - 129
2325087	Etridiazole	56.0	66.5	P/P	50 - 150
2325087	Fenamiphos	68.6	55.9	P/P	31 - 137
2325087	Fenbuconazole	113	98.7	P/P	57 - 160
2325087	Fipronil	98.8	86.8	P/P	62 - 132
2325087	Fipronil Desulfinyl	80.3	73.1	P/P	57 - 131
2325087	Fipronil Sulfide	71.3	75.7	P/P	15 - 138
2325087	Fipronil Sulfone	68.2	75.9	P/P	21 - 134
2325087	Fluazifop-P-butyl	64.8	81.7	P/P	54 - 133
2325087	Fludioxonil	87.0	89.8	P/P	58 - 127
2325087	Flumioxazin	132	92.6	P/P	33 - 300
2325087	Flutolanil	82.9	76.9	P/P	42 - 130
2325087	Fluxapyroxad	82.3	67.6	P/P	23 - 141
2325087	Fonofos	81.0	94.1	P/P	58 - 119
2325087	Hexazinone	73.4	90.0	P/P	68 - 172
2325087	Imazalil	81.5	73.0	P/P	48 - 283
2325087	Iprodione	84.8	75.9	P/P	38 - 140
2325087	Loratadine	67.1	80.0	P/P	50 - 150
2325087	Malathion	87.8	91.9	P/P	40 - 137
2325087	Metalaxyl	86.5	78.4	P/P	21 - 129
2325087	Metolachlor	98.1	96.0	P/P	55 - 122
2325087	Metribuzin	94.5	101	P/P	38 - 187
2325087	Mevinphos	67.1	79.3	P/P	54 - 134
2325087	Molinate	72.5	76.1	P/P	41 - 97.0
2325087	Myclobutanil	105	95.4	P/P	56 - 125
2325087	Naled	81.0	82.8	P/P	10 - 108

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P413451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2325087	Napropamide	62.3	53.6	P/P	50 - 150
2325087	Norflurazon	67.8	78.5	P/P	32 - 122
2325087	Oxyfluorfen	124	122	P/P	61 - 153
2325087	Parathion Ethyl	84.5	92.1	P/P	59 - 130
2325087	Parathion Methyl	83.7	96.5	P/P	65 - 155
2325087	Pendimethalin	107	101	P/P	49 - 138
2325087	Phenytoin	63.4	53.6	P/P	50 - 200
2325087	Phorate	74.5	88.8	P/P	54 - 161
2325087	Prodiamine	53.3	54.9	P/P	33 - 161
2325087	Prometon	79.4	78.1	P/P	48 - 140
2325087	Prometryn	67.7	69.7	P/P	55 - 134
2325087	Pronamide	115	119	P/P	66 - 137
2325087	Propanil	82.7	77.8	P/P	50 - 150
2325087	Propargite	152	156	P/P	50 - 200
2325087	Propiconazole	80.3	79.9	P/P	36 - 150
2325087	Pyraflufen Ethyl	63.0	70.6	P/P	50 - 150
2325087	Pyridaben	70.2	68.7	P/P	50 - 200
2325087	Pyriproxyfen	80.8	63.7	P/P	10 - 165
2325087	Simazine	127	112	P/P	57 - 145
2325087	Stirophos	95.3	96.3	P/P	50 - 150
2325087	Sulfentrazone	63.9	69.4	P/P	34 - 140
2325087	Tebuconazole	46.5	31.5	P/P	10 - 127
2325087	Terbufos	102	123	P/P	59 - 138
2325087	Terbuthylazine	97.4	115	P/P	68 - 119
2325087	Thiobencarb	92.0	89.7	P/P	50 - 150
2325087	Triadimefon	79.6	70.6	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P413320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323843	Acesulfame K	90.5	90.4	P/P	40 - 150
2323843	AMPA	67.5	65.9	P/P	40 - 150
2323843	Endothall	89.8	91.7	P/P	40 - 150
2323843	Glufosinate	71.3	76.7	P/P	40 - 150
2323843	Glyphosate	61.3	69.4	P/P	40 - 150
2323843	Sucralose	86.2	92.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P413414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324068	2,4-D	84.2	96.0	P/P	40 - 150
2324068	2,4,5-T	68.8	91.7	P/P	40 - 150
2324068	Acetaminophen	102	103	P/P	30 - 150
2324068	Acetamiprid	62.2	71.7	P/P	40 - 150
2324068	Afidopyropen	60.6	68.9	P/P	30 - 150
2324068	Bentazon	109	126	P/P	30 - 150
2324068	Benzovindiflupyr	79.4	78.6	P/P	40 - 150
2324068	Carbamazepine	82.3	86.6	P/P	40 - 150
2324068	Clothianidin	105	112	P/P	40 - 150
2324068	Dinotefuran	115	121	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P413414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324068	Diuron	79.9	85.8	P/P	40 - 150
2324068	Fenuron	106	101	P/P	40 - 150
2324068	Fluridone	73.7	82.0	P/P	40 - 150
2324068	Hydrocodone	96.3	99.3	P/P	40 - 150
2324068	Ibuprofen	63.8	62.5	P/P	40 - 150
2324068	Imazapyr	128	132	P/P	40 - 150
2324068	Imidacloprid	92.5	102	P/P	40 - 150
2324068	Linuron	64.9	77.2	P/P	40 - 150
2324068	Mandestrobin	72.4	77.1	P/P	40 - 150
2324068	MCPP	121	145	P/P	40 - 150
2324068	Naproxen	53.8	70.7	P/P	40 - 150
2324068	Primidone	105	119	P/P	40 - 150
2324068	Pyraclostrobin	74.1	70.8	P/P	40 - 150
2324068	Silvex	83.0	92.9	P/P	40 - 150
2324068	Thiamethoxam	91.1	96.8	P/P	40 - 150
2324068	Tolfenpyrad	60.8	55.8	P/P	30 - 150
2324068	Triclopyr	79.9	96.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P413847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324917	Fluoride	98.0	97.4	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P413752

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324264	Organic Carbon	95.1	95.5	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324849	Color (true)	3.81	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324870	Turbidity	5.21	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324875	Calcium	1.52	Spike	P	0 - 20
2324875	Iron	1.45	Spike	P	0 - 20
2324875	Magnesium	1.53	Spike	P	0 - 20
2324875	Potassium	0.279	Spike	P	0 - 20
2324875	Sodium	0.874	Spike	P	0 - 20
2324875	Strontium	1.89	Spike	P	0 - 20
2324875	Tin	4.64	Spike	P	0 - 20
2324875	Titanium	2.74	Spike	P	0 - 20
2324875	Vanadium	3.09	Spike	P	0 - 20
2324875	Zinc	4.69	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324875	Aluminum	15.8	Spike	P	0 - 20
2324875	Antimony	1.38	Spike	P	0 - 20
2324875	Arsenic	2.92	Spike	P	0 - 20
2324875	Barium	4.64	Spike	P	0 - 20
2324875	Beryllium	1.73	Spike	P	0 - 20
2324875	Boron	4.75	Spike	P	0 - 20
2324875	Cadmium	2.78	Spike	P	0 - 20
2324875	Chromium	3.96	Spike	P	0 - 20
2324875	Cobalt	3.42	Spike	P	0 - 20
2324875	Copper	2.55	Spike	P	0 - 20
2324875	Lead	5.29	Spike	P	0 - 20
2324875	Manganese	3.68	Spike	P	0 - 20
2324875	Molybdenum	3.21	Spike	P	0 - 20
2324875	Nickel	3.03	Spike	P	0 - 20
2324875	Selenium	1.64	Spike	P	0 - 20
2324875	Silver	2.60	Spike	P	0 - 20
2324875	Thallium	6.13	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Chloride	0.116	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Sulfate	0.0768	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325150	Ammonia-N	0.179	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324748	Kjeldahl Nitrogen	4.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324757	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327259	Total-P	2.63	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324749	O-Phosphate-P	0.762	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P413451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325087	Acetochlor	0.971	Spike	P	0 - 27
2325087	Alachlor	6.05	Spike	P	0 - 27

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P413451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325087	Ametryn	21.0	Spike	P	0 - 34
2325087	Atrazine	0.781	Spike	P	0 - 41
2325087	Atrazine Desethyl	23.4	Spike	P	0 - 38
2325087	Azinphos Methyl	5.94	Spike	P	0 - 62
2325087	Azoxystrobin	11.9	Spike	P	0 - 32
2325087	Bromacil	5.20	Spike	P	0 - 30
2325087	Butylate	5.23	Spike	P	0 - 59
2325087	Caffeine	11.2	Spike	P	0 - 60
2325087	Carbophenothion	4.25	Spike	P	0 - 25
2325087	Carfentrazone Ethyl	1.71	Spike	P	0 - 26
2325087	Chlorfenapyr	7.50	Spike	P	0 - 30
2325087	Chlorpyrifos Ethyl	0.985	Spike	P	0 - 27
2325087	Chlorpyrifos Methyl	15.6	Spike	P	0 - 26
2325087	Coumaphos	10.2	Spike	P	0 - 30
2325087	Cyanazine	24.1	Spike	P	0 - 58
2325087	Cyprodinil	4.94	Spike	P	0 - 30
2325087	Demeton	20.7	Spike	P	0 - 25
2325087	Diazinon	22.5	Spike	P	0 - 29
2325087	Difenoconazole	16.9	Spike	P	0 - 25
2325087	Dimethenamid	15.8	Spike	P	0 - 30
2325087	Dimethomorph	22.3	Spike	P	0 - 30
2325087	Disulfoton	20.1	Spike	P	0 - 33
2325087	Dithiopyr	18.1	Spike	P	0 - 22
2325087	EPTC	31.0	Spike	P	0 - 38
2325087	Ethion	48.0	Spike	P	0 - 79
2325087	Ethoprop	15.2	Spike	P	0 - 23
2325087	Etridiazole	17.2	Spike	P	0 - 30
2325087	Fenamiphos	20.4	Spike	P	0 - 58
2325087	Fenbuconazole	13.9	Spike	P	0 - 37
2325087	Fipronil	12.9	Spike	P	0 - 33
2325087	Fipronil Desulfinyl	9.44	Spike	P	0 - 26
2325087	Fipronil Sulfide	6.08	Spike	P	0 - 37
2325087	Fipronil Sulfone	10.7	Spike	P	0 - 50
2325087	Fluazifop-P-butyl	23.1	Spike	P	0 - 24
2325087	Fludioxonil	3.20	Spike	P	0 - 26
2325087	Flumioxazin	35.1	Spike	P	0 - 37
2325087	Flutolanil	7.06	Spike	P	0 - 26
2325087	Fluxapyroxad	19.5	Spike	P	0 - 34
2325087	Fonofos	14.9	Spike	P	0 - 27
2325087	Hexazinone	8.85	Spike	P	0 - 36
2325087	Imazalil	11.0	Spike	P	0 - 65
2325087	Iprodione	11.1	Spike	P	0 - 33
2325087	Loratadine	17.5	Spike	P	0 - 30
2325087	Malathion	4.62	Spike	P	0 - 44
2325087	Metalaxyl	8.65	Spike	P	0 - 38
2325087	Metolachlor	1.63	Spike	P	0 - 36
2325087	Metribuzin	6.36	Spike	P	0 - 63
2325087	Mevinphos	16.5	Spike	P	0 - 26
2325087	Molinate	4.82	Spike	P	0 - 40
2325087	Myclobutanil	9.37	Spike	P	0 - 21
2325087	Naled	2.27	Spike	P	0 - 26

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P413451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2325087	Napropamide	15.0	Spike	P	0 - 30
2325087	Norflurazon	11.3	Spike	P	0 - 24
2325087	Oxyfluorfen	0.950	Spike	P	0 - 24
2325087	Parathion Ethyl	8.57	Spike	P	0 - 28
2325087	Parathion Methyl	14.2	Spike	P	0 - 27
2325087	Pendimethalin	5.63	Spike	P	0 - 31
2325087	Phenytoin	16.6	Spike	P	0 - 30
2325087	Phorate	17.4	Spike	P	0 - 27
2325087	Prodiamine	3.06	Spike	P	0 - 52
2325087	Prometon	1.60	Spike	P	0 - 31
2325087	Prometryn	2.97	Spike	P	0 - 28
2325087	Pronamide	2.90	Spike	P	0 - 26
2325087	Propanil	6.10	Spike	P	0 - 30
2325087	Propargite	2.47	Spike	P	0 - 30
2325087	Propiconazole	0.466	Spike	P	0 - 31
2325087	Pyraflufen Ethyl	11.3	Spike	P	0 - 30
2325087	Pyridaben	2.18	Spike	P	0 - 30
2325087	Pyriproxyfen	23.6	Spike	P	0 - 50
2325087	Simazine	12.6	Spike	P	0 - 29
2325087	Stirophos	0.962	Spike	P	0 - 30
2325087	Sulfentrazone	8.23	Spike	P	0 - 33
2325087	Tebuconazole	38.4	Spike	P	0 - 44
2325087	Terbufos	19.1	Spike	P	0 - 29
2325087	Terbuthylazine	16.4	Spike	P	0 - 27
2325087	Thiobencarb	2.51	Spike	P	0 - 30
2325087	Triadimefon	12.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P413320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323843	Acesulfame K	0.121	Spike	P	0 - 30
2323843	AMPA	1.75	Spike	P	0 - 30
2323843	Endothall	2.12	Spike	P	0 - 30
2323843	Glufosinate	7.35	Spike	P	0 - 30
2323843	Glyphosate	6.14	Spike	P	0 - 30
2323843	Sucralose	3.19	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P413414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324068	2,4-D	13.0	Spike	P	0 - 30
2324068	2,4,5-T	28.6	Spike	P	0 - 30
2324068	Acetaminophen	1.40	Spike	P	0 - 30
2324068	Acetamiprid	14.2	Spike	P	0 - 30
2324068	Afidopyropen	12.9	Spike	P	0 - 30
2324068	Bentazon	14.7	Spike	P	0 - 30
2324068	Benzovindiflupyr	0.962	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P413414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324068	Carbamazepine	5.08	Spike	P	0 - 30
2324068	Clothianidin	6.83	Spike	P	0 - 30
2324068	Dinotefuran	4.96	Spike	P	0 - 30
2324068	Diuron	7.12	Spike	P	0 - 30
2324068	Fenuron	4.80	Spike	P	0 - 30
2324068	Fluridone	10.6	Spike	P	0 - 30
2324068	Hydrocodone	3.10	Spike	P	0 - 30
2324068	Ibuprofen	2.02	Spike	P	0 - 30
2324068	Imazapyr	3.26	Spike	P	0 - 30
2324068	Imidacloprid	10.2	Spike	P	0 - 30
2324068	Linuron	17.2	Spike	P	0 - 30
2324068	Mandestrobin	6.28	Spike	P	0 - 30
2324068	MCPP	18.2	Spike	P	0 - 30
2324068	Naproxen	27.1	Spike	P	0 - 30
2324068	Primidone	12.2	Spike	P	0 - 30
2324068	Pyraclostrobin	4.52	Spike	P	0 - 30
2324068	Silvex	11.2	Spike	P	0 - 30
2324068	Thiamethoxam	6.03	Spike	P	0 - 30
2324068	Tolfenpyrad	8.45	Spike	P	0 - 30
2324068	Triclopyr	18.6	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P413845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324917	Total Alkalinity	0.764	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P413945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324923	TDS	2.67	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324917	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P413752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324264	Organic Carbon	0.311	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2324752
Field Sample ID: G1TLHR0166

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	42.5	P	30 - 160
EPA 8321B	Diuron-d6	32.6	P	30 - 160
EPA 8321B	Endothall-d6	96.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.4	P	30 - 160
EPA 8321B	Primidone-d5	72.6	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2324754
Field Sample ID: G1TLHR0166

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	52.7	P	20 - 200
EPA 8270E	Simazine-d10	86.5	P	71 - 140
EPA 8270E	Terbufos-d10	82.6	P	62 - 131

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A111942
Included Lab Sample IDs: 2324749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A111945
Included Lab Sample IDs: 2324747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1
Run ID: A111950
Included Lab Sample IDs: 2324747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	85 - 115

Reference Method: EPA 8321B
Run ID: A111975
Included Lab Sample IDs: 2324752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	112	P/P	60 - 160
Sucralose	98.3	99.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A111978
Included Lab Sample IDs: 2324752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	88.0	92.2	P/P	60 - 160
Endothall	96.3	94.8	P/P	60 - 160
Glufosinate	95.2	91.7	P/P	60 - 160
Glyphosate	95.3	93.6	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111983
Included Lab Sample IDs: 2324753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.7	103	P/P	90 - 110
Iron	99.4	103	P/P	90 - 110
Magnesium	99.6	103	P/P	90 - 110
Potassium	98.6	102	P/P	90 - 110
Sodium	98.1	101	P/P	90 - 110
Strontium	107	108	P/P	90 - 110
Tin	107	105	P/P	90 - 110
Titanium	108	105	P/P	90 - 110
Vanadium	109	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A112012
Included Lab Sample IDs: 2324753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	102	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A112014
Included Lab Sample IDs: 2324753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	98.0	P/P	90 - 110
Antimony	97.8	98.4	P/P	90 - 110
Arsenic	94.1	96.5	P/P	90 - 110
Barium	99.0	98.5	P/P	90 - 110
Beryllium	96.6	97.4	P/P	90 - 110
Boron	97.4	94.3	P/P	90 - 110
Cadmium	96.9	97.3	P/P	90 - 110
Chromium	96.7	97.4	P/P	90 - 110
Cobalt	94.6	94.9	P/P	90 - 110
Copper	95.3	95.1	P/P	90 - 110
Lead	97.3	97.3	P/P	90 - 110
Manganese	96.0	97.2	P/P	90 - 110
Molybdenum	95.6	96.0	P/P	90 - 110
Nickel	94.9	95.7	P/P	90 - 110
Selenium	96.0	96.5	P/P	90 - 110
Silver	97.1	97.4	P/P	90 - 110
Thallium	95.0	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A112023
Included Lab Sample IDs: 2324748

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A112033
Included Lab Sample IDs: 2324747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.4	96.4	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A112066
Included Lab Sample IDs: 2324748

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	97.6	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A112089
Included Lab Sample IDs: 2324748

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

Reference Method: EPA 8270E
Run ID: A112116
Included Lab Sample IDs: 2324754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	107		P	80 - 120
Atrazine Desethyl	107		P	80 - 120
Azinphos Methyl	86.9		P	80 - 120
Azoxystrobin	94.9		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	95.8		P	80 - 120
Caffeine	98.6		P	80 - 120
Carbophenothion	91.6		P	80 - 120
Carfentrazone Ethyl	77.6*		F	80 - 120
Chlorfenapyr	82.0		P	80 - 120
Chlorpyrifos Ethyl	97.5		P	80 - 120
Chlorpyrifos Methyl	99.4		P	80 - 120
Coumaphos	65.8*		F	80 - 120
Cyanazine	92.9		P	80 - 120
Cyprodinil	109		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	109		P	80 - 120
Difenoconazole	81.8		P	80 - 120
Dimethenamid	111		P	80 - 120
Dimethomorph	97.5		P	80 - 120
Disulfoton	89.2		P	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	94.0		P	80 - 120
Ethion	88.3		P	80 - 120
Ethoprop	104		P	80 - 120
Etridiazole	97.8		P	80 - 120
Fenamiphos	94.7		P	80 - 120
Fenbuconazole	91.5		P	80 - 120
Fipronil	98.1		P	80 - 120
Fipronil Desulfinyl	110		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	82.2		P	80 - 120
Fludioxonil	108		P	80 - 120
Flumioxazin	80.8		P	80 - 120
Flutolanil	102		P	80 - 120
Fluxapyroxad	86.0		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	95.3		P	80 - 120
Imazalil	118		P	80 - 120
Iprodione	92.6		P	80 - 120
Loratadine	94.0		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A112116
Included Lab Sample IDs: 2324754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Malathion	92.2		P	80 - 120
Metalaxyl	104		P	80 - 120
Metolachlor	95.1		P	80 - 120
Metribuzin	94.2		P	80 - 120
Mevinphos	92.4		P	80 - 120
Molinate	109		P	80 - 120
Myclobutanil	106		P	80 - 120
Naled	97.3		P	80 - 120
Napropamide	109		P	80 - 120
Norflurazon	88.9		P	80 - 120
Oxadiazon	109		P	80 - 120
Oxyfluorfen	99.5		P	80 - 120
Parathion Ethyl	96.1		P	80 - 120
Parathion Methyl	114		P	80 - 120
Pendimethalin	92.2		P	80 - 120
Phenytoin	77.4*		F	80 - 120
Phorate	110		P	80 - 120
Prodiamine	116		P	80 - 120
Prometon	107		P	80 - 120
Prometryn	99.8		P	80 - 120
Pronamide	107		P	80 - 120
Propanil	104		P	80 - 120
Propargite	87.1		P	80 - 120
Propiconazole	84.8		P	80 - 120
Pyraflufen Ethyl	84.3		P	80 - 120
Pyridaben	83.3		P	80 - 120
Pyriproxyfen	94.7		P	80 - 120
Stirophos	81.4		P	80 - 120
Sulfentrazone	85.6		P	80 - 120
Tebuconazole	78.2*		F	80 - 120
Terbufos	103		P	80 - 120
Terbuthylazine	115		P	80 - 120
Thiobencarb	100		P	80 - 120
Triadimefon	97.4		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A112154
Included Lab Sample IDs: 2324747

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	96.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A112154
Included Lab Sample IDs: 2324747

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A112172
Included Lab Sample IDs: 2324752

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	113	118	P/P	50 - 150
2,4,5-T	122	125	P/P	50 - 150
Acetaminophen	128	129	P/P	60 - 160
Acetamiprid	123	121	P/P	50 - 150
Afidopyropen	106	105	P/P	50 - 150
Bentazon	135	118	P/P	50 - 160
Benzovindiflupyr	125	121	P/P	50 - 150
Carbamazepine	121	126	P/P	60 - 150
Clothianidin	133	130	P/P	60 - 150
Dinotefuran	119	119	P/P	50 - 150
Diuron	127	130	P/P	60 - 160
Fenuron	114	121	P/P	60 - 150
Fluridone	111	111	P/P	60 - 160
Hydrocodone	117	120	P/P	60 - 150
Ibuprofen	97.2	94.9	P/P	50 - 160
Imazapyr	120	132	P/P	50 - 150
Imidacloprid	142	140	P/P	60 - 150
Linuron	111	121	P/P	60 - 150
Mandestrobin	110	109	P/P	50 - 150
MCPP	124	127	P/P	50 - 150
Naproxen	108	95.2	P/P	50 - 160
Primidone	122	122	P/P	60 - 150
Pyraclostrobin	110	105	P/P	60 - 150
Silvex	139	139	P/P	50 - 150
Thiamethoxam	128	136	P/P	50 - 150
Tolfenpyrad	133	124	P/P	60 - 150
Triclopyr	117	145	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A112275
Included Lab Sample IDs: 2324754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	96.5		P	80 - 120
Simazine	101		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112335
Included Lab Sample IDs: 2324748

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

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision		
						LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	101					3.81	
EPA 180.1 Rev. 2.0	Turbidity	95.3					5.21	
EPA 200.7 Rev. 4.4	Calcium	107	107	111				1.52
	Iron	104	112	110	111			1.45
	Magnesium	104	113	110	112			1.53
	Potassium	102	107	107	110			0.279
	Sodium	102	110	108	112			0.874
	Strontium	103	109	107	109			1.89
	Tin	104	113	108	110			4.64
	Titanium	104	111	108	110			2.74
	Vanadium	98.6	107	103	103			3.09
	Zinc	107	104	99.5	110			4.69
EPA 200.8 Rev. 5.4	Aluminum	104	94.7	113	99.7			15.8
	Antimony	101	99.6	101	98.8			1.38
	Arsenic	99.4	96.1	99.0	98.0			2.92
	Barium	105	103	109	103			4.64
	Beryllium	101	94.6	96.4	97.6			1.73
	Boron	105	102	108	99.2			4.75
	Cadmium	99.9	98.8	102	96.7			2.78
	Chromium	99.8	102	106	98.4			3.96
	Cobalt	98.6	95.9	99.3	96.1			3.42
	Copper	98.0	96.3	98.8	96.4			2.55
	Lead	102	99.5	105	101			5.29
	Manganese	99.8	101	110	97.9			3.68
	Molybdenum	99.1	98.8	102	97.6			3.21
	Nickel	99.2	97.4	100	94.9			3.03
	Selenium	101	96.2	97.8	97.1			1.64
	Silver	96.6	96.6	99.1	95.0			2.60
	Thallium	102	99.6	106	100			6.13
EPA 300.0 Rev. 2.1	Chloride	98.7	97.1	95.0			0.116	
	Sulfate	102	98.4	99.1			0.0768	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	98.4	98.2				0.179
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1	96.4	105				4.44
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.5					0.0
EPA 365.1 Rev. 2.0	Total-P	104	103	97.8				2.63
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	97.2	98.2				0.762
EPA 8270E	Acetochlor	95.0	92.2	91.3				0.971
	Alachlor	86.3	99.5	93.6				6.05
	Ametryn	128	82.5	66.8				21.0
	Atrazine	88.9						0.781
	Atrazine Desethyl	57.0	46.5	58.9				23.4
	Azinphos Methyl	71.9	108	102				5.94
	Azoxystrobin	86.2	127	143				11.9
	Bromacil	52.0	73.2	80.0				5.20
	Butylate	43.2	48.3	45.8				5.23
	Caffeine	81.3	73.8	82.6				11.2
	Carbophenothion	77.3	80.9	77.6				4.25
	Carfentrazone Ethyl	66.8	74.1	72.9				1.71
	Chlorfenapyr	64.0	64.7	69.7				7.50
	Chlorpyrifos Ethyl	78.8	84.4	85.2				0.985
	Chlorpyrifos Methyl	73.0	93.6	109				15.6
	Coumaphos	53.7	58.6	65.0				10.2
	Cyanazine	91.4	98.3	125				24.1
	Cyprodinil	86.6	101	106				4.94

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Demeton	79.9	101	124			20.7
	Diazinon	87.1	92.4	116			22.5
	Difenoconazole	54.1	104	87.9			16.9
	Dimethenamid	74.9	68.6	80.4			15.8
	Dimethomorph	188	67.7	84.7			22.3
	Disulfoton	75.2	69.4	84.9			20.1
	Dithiopyr	81.7	78.1	93.7			18.1
	EPTC	50.4	37.9	51.8			31.0
	Ethion	36.1	47.4	29.1			48.0
	Ethoprop	81.7	88.7	103			15.2
	Etridiazole	56.7	56.0	66.5			17.2
	Fenamiphos	58.4	68.6	55.9			20.4
	Fenbuconazole	62.5	113	98.7			13.9
	Fipronil	77.0	98.8	86.8			12.9
	Fipronil Desulfinyl	75.9	80.3	73.1			9.44
	Fipronil Sulfide	64.9	71.3	75.7			6.08
	Fipronil Sulfone	55.2	68.2	75.9			10.7
	Fluazifop-P-butyl	66.1	64.8	81.7			23.1
	Fludioxonil	72.8	87.0	89.8			3.20
	Flumioxazin	49.3	132	92.6			35.1
	Flutolanil	63.2	82.9	76.9			7.06
	Fluxapyroxad	54.5	82.3	67.6			19.5
	Fonofos	72.6	81.0	94.1			14.9
	Hexazinone	69.9	73.4	90.0			8.85
	Imazalil	106	81.5	73.0			11.0
	Iprodione	62.4	84.8	75.9			11.1
	Loratadine	179	67.1	80.0			17.5
	Malathion	76.4	87.8	91.9			4.62
	Metalaxyl	76.2	86.5	78.4			8.65
	Metolachlor	79.0	98.1	96.0			1.63
	Metribuzin	77.9	94.5	101			6.36
	Mevinphos	65.0	67.1	79.3			16.5
	Molinate	64.3	72.5	76.1			4.82
	Myclobutanil	73.3	105	95.4			9.37
	Naled	81.4	81.0	82.8			2.27
	Napropamide	60.6	62.3	53.6			15.0
	Norflurazon	64.1	67.8	78.5			11.3
	Oxyfluorfen	77.2	124	122			0.950
	Parathion Ethyl	78.9	84.5	92.1			8.57
	Parathion Methyl	110	83.7	96.5			14.2
	Pendimethalin	89.0	107	101			5.63
	Phenytoin	10.6	63.4	53.6			16.6
	Phorate	76.3	74.5	88.8			17.4
	Prodiamine	38.5	53.3	54.9			3.06
	Prometon	45.2	79.4	78.1			1.60
	Prometryn	68.4	67.7	69.7			2.97
	Pronamide	93.5	115	119			2.90
	Propanil	68.0	82.7	77.8			6.10
	Propargite	130	152	156			2.47
	Propiconazole	100	80.3	79.9			0.466
	Pyraflufen Ethyl	92.3	63.0	70.6			11.3
	Pyridaben	46.8	70.2	68.7			2.18
	Pyriproxyfen	53.8	80.8	63.7			23.6
	Simazine	71.1	127	112			12.6

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Stirophos	38.2	95.3	96.3			0.962
	Sulfentrazone	28.8	63.9	69.4			8.23
	Tebuconazole	36.5	46.5	31.5			38.4
	Terbufos	98.4	102	123			19.1
	Terbuthylazine	92.2	97.4	115			16.4
	Thiobencarb	71.8	92.0	89.7			2.51
	Triadimefon	73.3	79.6	70.6			12.0
EPA 8321B	2,4-D	92.4	84.2	96.0			13.0
	2,4,5-T	90.3	68.8	91.7			28.6
	Acesulfame K	112	90.5	90.4			0.121
	Acetaminophen	82.1	102	103			1.40
	Acetamiprid	77.2	62.2	71.7			14.2
	Afidopyropen	68.5	60.6	68.9			12.9
	AMPA	90.6	67.5	65.9			1.75
	Bentazon	106	109	126			14.7
	Benzovindiflupyr	82.5	79.4	78.6			0.962
	Carbamazepine	79.2	82.3	86.6			5.08
	Clothianidin	111	105	112			6.83
	Dinotefuran	115	115	121			4.96
	Diuron	89.4	79.9	85.8			7.12
	Endothall	102	89.8	91.7			2.12
	Fenuron	112	106	101			4.80
	Fluridone	81.2	73.7	82.0			10.6
	Glufosinate	93.5	71.3	76.7			7.35
	Glyphosate	92.3	61.3	69.4			6.14
	Hydrocodone	99.8	96.3	99.3			3.10
	Ibuprofen	78.3	62.5	63.8			2.02
	Imazapyr	111	128	132			3.26
	Imidacloprid	96.8	92.5	102			10.2
	Linuron	73.6	64.9	77.2			17.2
	Mandestrobin	79.2	72.4	77.1			6.28
	MCPP	135	121	145			18.2
	Naproxen	61.1	53.8	70.7			27.1
	Primidone	108	105	119			12.2
	Pyraclostrobin	73.5	74.1	70.8			4.52
	Silvex	105	83.0	92.9			11.2
	Sucralose	100	86.2	92.9			3.19
	Thiamethoxam	100	91.1	96.8			6.03
	Tolfenpyrad	57.2	60.8	55.8			8.45
	Triclopyr	94.9	79.9	96.2			18.6
SM 2320 B-2011	Total Alkalinity	97.9				0.764	
SM 2540 C-2011	TDS					2.67	
SM 4500-F- C-2011	Fluoride	97.9	98.0	97.4			0.480
SM 5310 B-2011	Organic Carbon	94.8	95.1	95.5			0.311

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2324747
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2324747
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2324753

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2324753
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2324747
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2324747
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2324748
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2324748
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2324748
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2324748
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2324749
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2324754
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2324752
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2324747
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2324753
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2324747
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2324747
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2324747
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2324748

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	05/04/2022			05/05/2022 11:48	Blanca Fach	2324747
EPA 180.1 Rev. 2.0	05/04/2022			05/05/2022 10:52	Anna M. Plaviak	2324747
EPA 200.7 Rev. 4.4	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/06/2022 22:53	McKinley C Carter	2324753
	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/09/2022 21:56	McKinley C Carter	2324753
EPA 200.8 Rev. 5.4	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/09/2022 18:00	Alexander Thompson	2324753
EPA 300.0 Rev. 2.1	05/04/2022			05/10/2022 08:44	Anna M. Plaviak	2324747
EPA 350.1 Rev. 2.0	05/04/2022			05/11/2022 10:33	Ping Hua	2324748
EPA 351.2 Rev. 2.0	05/04/2022	05/19/2022 15:12	Samantha L Bates	05/20/2022 13:34	Samantha L Bates	2324748
EPA 353.2 Rev. 2.0	05/04/2022			05/10/2022 12:23	Beverly Y. Sanders	2324748
EPA 365.1 Rev. 2.0	05/04/2022	05/20/2022 15:00	Simonne.V. Calhoun	05/23/2022 11:25	Sarah A Nixon	2324748
EPA 365.1 Rev. 2.0 dissolved	05/04/2022			05/05/2022 15:38	Nathaniel J Jones	2324749
EPA 8270E	05/04/2022	05/09/2022 08:00	Fe-Val Siddell	05/12/2022 17:46	Vandana T. Nagar	2324754
	05/04/2022	05/09/2022 08:00	Fe-Val Siddell	05/13/2022 20:43	Vandana T. Nagar	2324754
	05/04/2022	05/09/2022 08:00	Fe-Val Siddell	05/13/2022 21:10	Vandana T. Nagar	2324754
EPA 8321B	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/05/2022 22:49	Umesh Chiluwal	2324752
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/06/2022 13:03	Umesh Chiluwal	2324752
	05/04/2022	05/06/2022 10:30	June Rhew	05/09/2022 21:00	Juyoung Kim	2324752
SM 2320 B-2011	05/04/2022			05/12/2022 19:49	Dale L. Simmons	2324747
SM 2340 B-2011	05/04/2022			05/06/2022 22:53	McKinley C Carter	2324753
SM 2540 C-2011	05/04/2022			05/09/2022 15:28	Yijie Li	2324747
SM 2540 D-2011	05/04/2022			05/09/2022 13:28	Yijie Li	2324747
SM 4500-F- C-2011	05/04/2022			05/12/2022 19:49	Dale L. Simmons	2324747
SM 5310 B-2011	05/04/2022			05/12/2022 03:30	Judith K. Clark	2324748