

Chemical Analysis Report

TLH-ROC-2022-04-20-02

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 16-MAY-2022 09:34

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Crooked River @ Post 46

Collection Date/Time: 04/20/2022 12:10

Field ID: G2TLHR0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2320921	DEP SOP: NU-094-1	Color (true)**	240		PCU	P412726	
	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P412723	
	EPA 300.0 Rev. 2.1	Chloride	24	A	mg Cl/L	P413118	
		Sulfate	3.4	A	mg SO4/L	P413121	
	SM 2320 B-2011	Total Alkalinity	8.6		mg CaCO3/L	P413184	
	SM 2540 C-2011	TDS	99		mg/L	P413195	
	SM 2540 D-2011	TSS	5	I	mg/L	P413198	
	SM 4500-F- C-2011	Fluoride	0.051	I	mg F/L	P413189	
2320922	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P413067	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P413578	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.029		mg N/L	P412911	
	EPA 365.1 Rev. 2.0	Total-P	0.051		mg P/L	P413332	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P412815	
2320923	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.017		mg P/L	P412722	
2320926	EPA 8321B	2,4-D	0.0022	I	ug/L	P412640	
		Acesulfame K	0.10	U	ug/L	P412696	
		2,4,5-T	0.0040	U	ug/L	P412640	
		AMPA	0.10	U	ug/L	P412696	
		Acetaminophen	0.0080	U	ug/L	P412640	
		Acetamiprid	0.0020	U	ug/L	P412640	
		Endothall	0.25	U	ug/L	P412696	
		Glufosinate	0.10	U	ug/L	P412696	
		Glyphosate	0.10	U	ug/L	P412696	
		Afidopyropen	0.0020	U	ug/L	P412640	
		Bentazon	0.0030	I	ug/L	P412640	
		Sucralose	0.094		ug/L	P412696	
		Benzovindiflupyr	0.0020	U	ug/L	P412640	
		Carbamazepine	8.0E-04	U	ug/L	P412640	
		Clothianidin	0.0020	U	ug/L	P412640	
		Dinotefuran	0.0026	I	ug/L	P412640	
		Diuron	0.0020	U	ug/L	P412640	
		Fenuron	0.032	U	ug/L	P412640	
		Fluridone	8.0E-04	U	ug/L	P412640	
		Imazapyr	0.018		ug/L	P412640	
		Hydrocodone	0.0020	U	ug/L	P412640	
		Ibuprofen	0.020	U	ug/L	P412640	
		Imidacloprid	0.0020	U	ug/L	P412640	MS
		Linuron	0.0040	U	ug/L	P412640	
		Mandestrobin	0.0020	U	ug/L	P412640	
		MCP	0.0020	U	ug/L	P412640	
		Naproxen	0.0080	U	ug/L	P412640	
		Primidone	0.0040	U	ug/L	P412640	
		Pyraclostrobin	0.0020	U	ug/L	P412640	

Field ID: G2TLHR0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2320926	EPA 8321B	Silvex	0.0040	U	ug/L	P412640	
		Thiamethoxam	0.0020	U	ug/L	P412640	
		Tolfenpyrad	0.0020	U	ug/L	P412640	
		Triclopyr	0.0040	U	ug/L	P412640	
2320927	EPA 200.7 Rev. 4.4	Calcium	4.84		mg/L	P412801	
		Iron	650		ug/L	P412801	
		Magnesium	2.84		mg/L	P412801	
		Potassium	1.2		mg/L	P412801	
		Sodium	15.1		mg/L	P412801	
		Strontium	29.5		ug/L	P412801	
		Tin	3.0	U	ug/L	P412801	
		Titanium	1.5	I	ug/L	P412801	
		Vanadium	2.0	U	ug/L	P412801	
		Zinc	5.0	U	ug/L	P412801	
	EPA 200.8 Rev. 5.4	Aluminum	279		ug/L	P412801	
		Antimony	0.050	U	ug/L	P412801	
		Arsenic	0.48		ug/L	P412801	
		Barium	5.33		ug/L	P412801	
		Beryllium	0.018	I	ug/L	P412801	
		Boron**	20.9		ug/L	P412801	
		Cadmium	0.020	U	ug/L	P412801	
		Chromium	0.49	I	ug/L	P412801	
		Cobalt	0.071	I	ug/L	P412801	
		Copper	0.40	U	ug/L	P412801	
		Lead	0.49		ug/L	P412801	
		Manganese	8.15		ug/L	P412801	
		Molybdenum	0.15	U	ug/L	P412801	
		Nickel	0.50	U	ug/L	P412801	
		Selenium	0.20	U	ug/L	P412801	
		Silver	0.010	U	ug/L	P412801	
		Thallium	0.10	U	ug/L	P412801	
	SM 2340 B-2011	Hardness	23.8		mg/L	P412801	
2320928	EPA 8270E	Acetochlor	0.25	U	ng/L	P412654	
		Alachlor	0.25	U	ng/L	P412654	
		Ametryn	0.60	U	ng/L	P412654	
		Atrazine	7.2		ng/L	P412654	
		Atrazine Desethyl	1.5	U	ng/L	P412654	
		Azinphos Methyl	2.0	U	ng/L	P412654	
		Azoxystrobin**	0.69	I	ng/L	P412654	
		Bromacil	0.50	U	ng/L	P412654	
		Butylate	0.40	U	ng/L	P412654	
		Caffeine**	15	I	ng/L	P412654	
		Carbophenothion	0.20	U	ng/L	P412654	
		Carfentrazone Ethyl**	0.10	U	ng/L	P412654	
		Chlorfenapyr**	0.18	U	ng/L	P412654	

Field ID: G2TLHR0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2320928	EPA 8270E	Chlorpyrifos Ethyl	0.25	U	ng/L	P412654	
		Chlorpyrifos Methyl	0.050	U	ng/L	P412654	
		Coumaphos**	0.50	U	ng/L	P412654	
		Cyanazine	3.2	U	ng/L	P412654	
		Cyprodinil**	0.10	U	ng/L	P412654	
		Demeton	1.5	U	ng/L	P412654	
		Diazinon	0.12	U	ng/L	P412654	
		Difenoconazole**	0.60	U	ng/L	P412654	
		Dimethenamid**	5.5		ng/L	P412654	
		Dimethomorph**	0.18	U	ng/L	P412654	
		Disulfoton	0.50	U	ng/L	P412654	
		Dithiopyr**	0.18	U	ng/L	P412654	
		EPTC	1.2	U	ng/L	P412654	
		Ethion	0.15	U	ng/L	P412654	
		Ethoprop	0.10	U	ng/L	P412654	
		Etridiazole**	0.15	U	ng/L	P412654	
		Fenamiphos	0.50	U	ng/L	P412654	
		Fenbuconazole**	0.12	U	ng/L	P412654	
		Fipronil	0.25	U	ng/L	P412654	
		Fipronil Desulfinyl**	0.12	U	ng/L	P412654	
		Fipronil Sulfide	0.15	U	ng/L	P412654	
		Fipronil Sulfone	0.15	U	ng/L	P412654	
		Fluazifop-P-butyl**	0.10	U	ng/L	P412654	
		Fludioxonil**	0.12	U	ng/L	P412654	
		Flumioxazin**	1.8	U	ng/L	P412654	
		Flutolanil**	0.33	I	ng/L	P412654	
		Fluxapyroxad**	1.2		ng/L	P412654	
		Fonofos	0.20	U	ng/L	P412654	
		Hexazinone	0.88	I	ng/L	P412654	
		Imazalil**	0.75	U	ng/L	P412654	MS
		Iprodione**	0.60	U	ng/L	P412654	MS
		Loratadine**	0.10	U	ng/L	P412654	
		Malathion	0.35	U	ng/L	P412654	
		Metalaxyl	0.75	U	ng/L	P412654	
		Metolachlor	21		ng/L	P412654	
		Metribuzin	2.5	U	ng/L	P412654	
		Mevinphos	1.0	U	ng/L	P412654	
		Molinate	0.30	U	ng/L	P412654	
		Myclobutanil**	0.25	U	ng/L	P412654	
		Naled**	1.5	U	ng/L	P412654	
		Napropamide**	0.40	U	ng/L	P412654	
		Norflurazon	0.50	U	ng/L	P412654	
		Oxadiazon	0.78	I	ng/L	P412654	
		Oxyfluorfen**	0.15	U	ng/L	P412654	
		Parathion Ethyl	0.25	U	ng/L	P412654	

Field ID: G2TLHR0038

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2320928	EPA 8270E	Parathion Methyl	0.55	U	ng/L	P412654	
		Pendimethalin	1.0	U	ng/L	P412654	
		Phenytol**	3.5	U	ng/L	P412654	
		Phorate	0.52	U	ng/L	P412654	
		Prodiamine**	3.8		ng/L	P412654	
		Prometon	0.90	U	ng/L	P412654	
		Prometryn	0.20	U	ng/L	P412654	
		Pronamide**	0.15	U	ng/L	P412654	
		Propanil**	0.12	U	ng/L	P412654	
		Propargite**	1.5	U	ng/L	P412654	
		Propiconazole**	1.2	I	ng/L	P412654	
		Pyraflufen Ethyl**	0.25	U	ng/L	P412654	
		Pyridaben**	0.45	U	ng/L	P412654	
		Pyriproxyfen**	0.12	U	ng/L	P412654	
		Simazine	2.7		ng/L	P412654	
		Stirophos**	0.12	U	ng/L	P412654	
		Sulfentrazone**	0.50	U	ng/L	P412654	
		Tebuconazole**	2.8		ng/L	P412654	
		Terbufos	0.10	U	ng/L	P412654	
		Terbutylazine	0.42	U	ng/L	P412654	
		Thiobencarb**	0.60	U	ng/L	P412654	
		Triadimefon**	0.25	U	ng/L	P412654	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412726

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412723

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412801

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: P412801

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: P413118

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: P413121

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413067

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413578

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412911

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413332

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412722

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

Reference Method: EPA 8270E
Batch ID: P412654

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: P412654

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: P412654

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
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412654

Component	Result	Code	Units
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
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: P412640

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P412640

Component	Result	Code	Units
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	0.0020	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: EPA 8321B

Batch ID: P412696

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: SM 2320 B-2011

Batch ID: P413184

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

Reference Method: SM 2540 C-2011

Batch ID: P413195

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P413198

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P413189

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412815

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: P412726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.4		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.5		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	106		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	106		P	85 - 115
Sodium	101		P	85 - 115
Strontium	103		P	85 - 115
Tin	103		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	94.8		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.7		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	97.5		P	85 - 115
Barium	101		P	85 - 115
Beryllium	96.4		P	85 - 115
Boron	103		P	85 - 115
Cadmium	98.4		P	85 - 115
Chromium	97.5		P	85 - 115
Cobalt	98.0		P	85 - 115
Copper	96.8		P	85 - 115
Lead	98.4		P	85 - 115
Manganese	98.1		P	85 - 115
Molybdenum	98.2		P	85 - 115
Nickel	99.2		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	97.4		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413118

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413067

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413578

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413332

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412722

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

Reference Method: EPA 8270E
Batch ID: P412654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	78.6		P	70 - 121
Alachlor	72.3		P	68 - 119
Ametryn	69.0		P	64 - 139
Atrazine	85.3		P	76 - 120
Atrazine Desethyl	47.7		P	44 - 126
Azinphos Methyl	115		P	43 - 192
Azoxystrobin	81.0		P	36 - 224
Bromacil	68.8		P	52 - 121
Butylate	48.8		P	28 - 91.0
Caffeine	98.8		P	50 - 134
Carbophenothion	97.9		P	56 - 129
Carfentrazone Ethyl	87.0		P	60 - 141
Chlorfenapyr	77.2		P	56 - 115
Chlorpyrifos Ethyl	93.2		P	60 - 118
Chlorpyrifos Methyl	103		P	68 - 119
Coumaphos	111		P	18 - 250

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	91.1		P	61 - 250
Cyprodinil	71.6		P	55 - 145
Demeton	73.1		P	30 - 159
Diazinon	77.0		P	70 - 123
Difenoconazole	109		P	49 - 204
Dimethenamid	64.8		P	64 - 115
Dimethomorph	61.0		P	12 - 219
Disulfoton	83.7		P	44 - 125
Dithiopyr	78.5		P	64 - 115
EPTC	45.9		P	28 - 86.0
Ethion	84.0		P	33 - 125
Ethoprop	69.9		P	64 - 116
Etridiazole	53.0		P	34 - 91.0
Fenamiphos	103		P	12 - 127
Fenbuconazole	84.2		P	59 - 151
Fipronil	77.2		P	67 - 129
Fipronil Desulfinyl	76.1		P	65 - 127
Fipronil Sulfide	76.6		P	61 - 116
Fipronil Sulfone	93.9		P	55 - 117
Fluazifop-P-butyl	79.4		P	62 - 127
Fludioxonil	78.4		P	62 - 128
Flumioxazin	138		P	33 - 250
Flutolanil	79.0		P	56 - 127
Fluxapyroxad	94.6		P	45 - 128
Fonofos	74.1		P	62 - 111
Hexazinone	84.6		P	46 - 139
Imazalil	63.0		P	38 - 142
Iprodione	108		P	47 - 135
Loratadine	54.5		P	10 - 244
Malathion	108		P	61 - 139
Metalaxyl	69.5		P	10 - 119
Metolachlor	76.9		P	65 - 118
Metribuzin	77.1		P	51 - 250
Mevinphos	53.0		P	53 - 121
Molinate	59.2		P	42 - 96.0
Myclobutanil	78.0		P	55 - 128
Naled	88.1		P	10 - 98.0
Napropamide	72.9		P	49 - 121
Norflurazon	76.2		P	61 - 126
Oxadiazon	72.1		P	59 - 116
Oxyfluorfen	85.9		P	64 - 137
Parathion Ethyl	86.0		P	70 - 112
Parathion Methyl	94.5		P	76 - 133
Pendimethalin	81.9		P	52 - 117
Phenytol	63.4		P	10 - 199
Phorate	61.2		P	48 - 121
Prodiamine	93.4		P	26 - 142
Prometon	72.9		P	43 - 123
Prometryn	70.3		P	66 - 127
Pronamide	76.9		P	75 - 121
Propanil	76.9		P	45 - 150
Propargite	97.8		P	42 - 208

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P412654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propiconazole	81.2		P	60 - 125
Pyraflufen Ethyl	87.6		P	70 - 138
Pyridaben	105		P	35 - 245
Pyriproxyfen	99.9		P	30 - 149
Simazine	83.4		P	72 - 125
Stirophos	101		P	29 - 164
Sulfentrazone	72.9		P	21 - 139
Tebuconazole	91.2		P	10 - 115
Terbufos	92.8		P	60 - 123
Terbuthylazine	74.2		P	72 - 115
Thiobencarb	77.1		P	31 - 139
Triadimefon	65.7		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P412640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.1		P	30 - 160
2,4,5-T	65.1		P	30 - 160
Acetaminophen	48.9		P	30 - 150
Acetamiprid	89.6		P	30 - 160
Afidopyropen	58.7		P	30 - 160
Bentazon	46.5		P	30 - 150
Benzovindiflupyr	79.1		P	30 - 160
Carbamazepine	81.1		P	30 - 160
Clothianidin	88.6		P	30 - 160
Dinotefuran	76.6		P	30 - 160
Diuron	79.7		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	84.0		P	30 - 160
Hydrocodone	87.5		P	30 - 160
Ibuprofen	75.0		P	30 - 160
Imazapyr	85.1		P	30 - 160
Imidacloprid	88.1		P	30 - 160
Linuron	68.0		P	30 - 160
Mandestrobin	78.2		P	30 - 160
MCPP	82.2		P	30 - 160
Naproxen	55.2		P	30 - 160
Primidone	83.6		P	30 - 160
Pyraclostrobin	83.9		P	30 - 160
Silvex	65.0		P	30 - 160
Thiamethoxam	85.9		P	30 - 160
Tolfenpyrad	48.7		P	30 - 160
Triclopyr	73.0		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P412696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	108		P	40 - 150
Endothall	101		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P412696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glufosinate	108		P	40 - 150
Glyphosate	97.9		P	40 - 150
Sucralose	96.1		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413184

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

Reference Method: SM 4500-F- C-2011

Batch ID: P413189

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

Reference Method: SM 5310 B-2011

Batch ID: P412815

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320382	Calcium	99.4		P	80 - 120
2320382	Iron	110	105	P/P	80 - 120
2320382	Magnesium	107	104	P/P	80 - 120
2320382	Potassium	105	101	P/P	80 - 120
2320382	Sodium	97.4		P	80 - 120
2320382	Strontium	103	102	P/P	80 - 120
2320382	Tin	104	101	P/P	80 - 120
2320382	Titanium	107	103	P/P	80 - 120
2320382	Vanadium	98.6	97.0	P/P	80 - 120
2320382	Zinc	102	100	P/P	80 - 120
2320383	Calcium	104		P	80 - 120
2320383	Iron	108		P	80 - 120
2320383	Magnesium	107		P	80 - 120
2320383	Potassium	104		P	80 - 120
2320383	Sodium	103		P	80 - 120
2320383	Strontium	104		P	80 - 120
2320383	Tin	103		P	80 - 120
2320383	Titanium	103		P	80 - 120
2320383	Vanadium	98.4		P	80 - 120
2320383	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320382	Aluminum	103	110	P/P	80 - 120
2320382	Antimony	104	104	P/P	80 - 120
2320382	Arsenic	96.7	96.7	P/P	80 - 120
2320382	Barium	103	102	P/P	80 - 120
2320382	Beryllium	95.9	99.4	P/P	80 - 120
2320382	Boron	110	110	P/P	80 - 120
2320382	Cadmium	102	103	P/P	80 - 120
2320382	Chromium	101	103	P/P	80 - 120
2320382	Cobalt	97.3	97.4	P/P	80 - 120
2320382	Copper	95.6	96.3	P/P	80 - 120
2320382	Lead	100	101	P/P	80 - 120
2320382	Manganese	111	113	P/P	80 - 120
2320382	Molybdenum	101	101	P/P	80 - 120
2320382	Nickel	98.7	99.2	P/P	80 - 120
2320382	Selenium	96.0	95.2	P/P	80 - 120
2320382	Silver	98.8	97.8	P/P	80 - 120
2320382	Thallium	103	104	P/P	80 - 120
2320383	Aluminum	102		P	80 - 120
2320383	Antimony	102		P	80 - 120
2320383	Arsenic	97.7		P	80 - 120
2320383	Barium	101		P	80 - 120
2320383	Beryllium	94.1		P	80 - 120
2320383	Boron	106		P	80 - 120
2320383	Cadmium	102		P	80 - 120
2320383	Chromium	99.1		P	80 - 120
2320383	Cobalt	98.7		P	80 - 120
2320383	Copper	96.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320383	Lead	100		P	80 - 120
2320383	Manganese	97.5		P	80 - 120
2320383	Molybdenum	98.0		P	80 - 120
2320383	Nickel	98.2		P	80 - 120
2320383	Selenium	96.5		P	80 - 120
2320383	Silver	97.0		P	80 - 120
2320383	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320921	Chloride	98.4		P	90 - 110
2320955	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P413121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320921	Sulfate	97.3		P	90 - 110
2320955	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P413067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320891	Ammonia-N	98.4	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P413578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320962	Kjeldahl Nitrogen	102	99.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320891	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P413332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320889	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P412722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321061	O-Phosphate-P	95.0	96.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321252	Acetochlor	92.8	87.9	P/P	65 - 124
2321252	Alachlor	77.2	76.5	P/P	61 - 121
2321252	Ametryn	87.2	78.0	P/P	52 - 216
2321252	Atrazine	91.1	91.4	P/P	68 - 133
2321252	Atrazine Desethyl	51.6	49.1	P/P	15 - 160
2321252	Azinphos Methyl	134	134	P/P	40 - 292
2321252	Azoxystrobin	92.3	83.4	P/P	12 - 242
2321252	Bromacil	77.9	74.6	P/P	54 - 167
2321252	Butylate	56.2	54.4	P/P	14 - 94.0
2321252	Caffeine	92.0	96.4	P/P	10 - 226
2321252	Carbophenothion	102	107	P/P	49 - 122
2321252	Carfentrazone Ethyl	109	113	P/P	53 - 138
2321252	Chlorfenapyr	78.4	76.3	P/P	50 - 150
2321252	Chlorpyrifos Ethyl	87.4	81.3	P/P	52 - 122
2321252	Chlorpyrifos Methyl	109	96.9	P/P	66 - 117
2321252	Coumaphos	134	131	P/P	50 - 220
2321252	Cyanazine	105	105	P/P	43 - 245
2321252	Cyprodinil	82.0	81.6	P/P	50 - 150
2321252	Demeton	82.6	79.2	P/P	43 - 188
2321252	Diazinon	93.0	97.3	P/P	69 - 131
2321252	Difenoconazole	132	139	P/P	34 - 231
2321252	Dimethenamid	77.6	75.5	P/P	55 - 118
2321252	Dimethomorph	74.8	70.2	P/P	50 - 150
2321252	Disulfoton	89.8	93.6	P/P	38 - 141
2321252	Dithiopyr	100	90.4	P/P	42 - 116
2321252	EPTC	45.3	49.6	P/P	18 - 85.0
2321252	Ethion	87.2	83.1	P/P	10 - 131
2321252	Ethoprop	93.3	97.6	P/P	65 - 129
2321252	Etridiazole	62.3	58.4	P/P	50 - 150
2321252	Fenamiphos	95.8	89.8	P/P	31 - 137
2321252	Fenbuconazole	98.9	100	P/P	57 - 160
2321252	Fipronil	94.9	94.7	P/P	62 - 132
2321252	Fipronil Desulfinyl	105	95.4	P/P	57 - 131
2321252	Fipronil Sulfide	80.1	84.2	P/P	15 - 138
2321252	Fipronil Sulfone	98.9	98.3	P/P	21 - 134
2321252	Fluazifop-P-butyl	87.6	101	P/P	54 - 133
2321252	Fludioxonil	85.3	93.9	P/P	58 - 127
2321252	Flumioxazin	183	181	P/P	33 - 300
2321252	Flutolanil	86.3	85.3	P/P	42 - 130
2321252	Fluxapyroxad	139	140	P/P	23 - 141
2321252	Fonofos	91.5	91.3	P/P	58 - 119
2321252	Hexazinone	102	94.3	P/P	68 - 172
2321252	Imazalil	43.8	51.5	F/P	48 - 283
2321252	Iprodione	147	150	F/F	38 - 140
2321252	Loratadine	73.8	64.0	P/P	50 - 150
2321252	Malathion	109	101	P/P	40 - 137
2321252	Metalaxyl	81.9	74.8	P/P	21 - 129
2321252	Metolachlor	84.1	80.3	P/P	55 - 122
2321252	Metribuzin	96.0	83.8	P/P	38 - 187
2321252	Mevinphos	76.9	86.5	P/P	54 - 134
2321252	Molinate	71.6	69.8	P/P	41 - 97.0
2321252	Myclobutanil	92.8	95.1	P/P	56 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2321252	Naled	88.8	84.2	P/P	10 - 108
2321252	Napropamide	71.5	70.8	P/P	50 - 150
2321252	Norflurazon	98.1	103	P/P	32 - 122
2321252	Oxadiazon	64.7	64.8	P/P	40 - 119
2321252	Oxyfluorfen	113	115	P/P	61 - 153
2321252	Parathion Ethyl	90.7	89.3	P/P	59 - 130
2321252	Parathion Methyl	111	100	P/P	65 - 155
2321252	Pendimethalin	108	106	P/P	49 - 138
2321252	Phenytoin	81.3	84.2	P/P	50 - 200
2321252	Phorate	75.0	73.6	P/P	54 - 161
2321252	Prodiamine	159	151	P/P	33 - 161
2321252	Prometon	82.4	78.1	P/P	48 - 140
2321252	Prometryn	80.9	78.3	P/P	55 - 134
2321252	Pronamide	101	90.8	P/P	66 - 137
2321252	Propanil	86.6	78.6	P/P	50 - 150
2321252	Propargite	118	114	P/P	50 - 200
2321252	Propiconazole	108	103	P/P	36 - 150
2321252	Pyraflufen Ethyl	112	118	P/P	50 - 150
2321252	Pyridaben	115	110	P/P	50 - 200
2321252	Pyriproxyfen	117	114	P/P	10 - 165
2321252	Simazine	94.6	88.9	P/P	57 - 145
2321252	Stirophos	98.9	93.1	P/P	50 - 150
2321252	Sulfentrazone	121	124	P/P	34 - 140
2321252	Tebuconazole	112	115	P/P	10 - 127
2321252	Terbufos	107	110	P/P	59 - 138
2321252	Terbutylazine	82.8	86.5	P/P	68 - 119
2321252	Thiobencarb	85.7	83.0	P/P	50 - 150
2321252	Triadimefon	71.9	73.2	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P412640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320526	2,4-D	76.1	88.7	P/P	30 - 160
2320526	2,4,5-T	67.4	69.8	P/P	30 - 160
2320526	Acetaminophen	93.0	98.0	P/P	30 - 150
2320526	Acetamiprid	85.5	92.5	P/P	30 - 160
2320526	Afidopyropen	52.7	56.1	P/P	30 - 160
2320526	Bentazon	43.8	58.3	P/P	30 - 150
2320526	Benzovindiflupyr	78.2	78.1	P/P	30 - 160
2320526	Carbamazepine	80.4	83.9	P/P	30 - 160
2320526	Clothianidin	110	116	P/P	30 - 160
2320526	Dinotefuran	106	123	P/P	30 - 160
2320526	Diuron	71.7	76.4	P/P	30 - 160
2320526	Fenuron	88.2	96.1	P/P	30 - 160
2320526	Fluridone	75.5	82.7	P/P	30 - 160
2320526	Hydrocodone	92.9	98.2	P/P	30 - 160
2320526	Ibuprofen	57.8	60.1	P/P	30 - 160
2320526	Imazapyr	122	111	P/P	30 - 160
2320526	Imidacloprid	151	166	P/F	30 - 160
2320526	Linuron	59.7	68.6	P/P	30 - 160
2320526	Mandestrobin	76.2	84.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P412640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320526	MCP	86.9	102	P/P	30 - 160
2320526	Naproxen	79.9	78.8	P/P	30 - 160
2320526	Primidone	96.5	109	P/P	30 - 160
2320526	Pyraclostrobin	83.3	94.1	P/P	30 - 160
2320526	Silvex	62.8	67.8	P/P	30 - 160
2320526	Thiamethoxam	137	150	P/P	30 - 160
2320526	Tolfenpyrad	44.5	49.0	P/P	30 - 160
2320526	Triclopyr	71.4	71.6	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P412696

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320528	Acesulfame K	94.5	92.1	P/P	40 - 150
2320528	AMPA	73.6	71.0	P/P	40 - 150
2320528	Endothall	99.8	96.4	P/P	40 - 150
2320528	Glufosinate	80.6	82.3	P/P	40 - 150
2320528	Glyphosate	68.3	68.5	P/P	40 - 150
2320528	Sucralose	105	100	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P413189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320888	Fluoride	102	102	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P412815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320851	Organic Carbon	98.4	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412726

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320955	Color (true)	2.07	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412723

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321046	Turbidity	2.04	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412801

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320382	Calcium	0.295	Spike	P	0 - 20
2320382	Iron	3.97	Spike	P	0 - 20
2320382	Magnesium	2.02	Spike	P	0 - 20
2320382	Potassium	2.38	Spike	P	0 - 20
2320382	Sodium	1.59	Spike	P	0 - 20
2320382	Strontium	1.29	Spike	P	0 - 20
2320382	Tin	3.05	Spike	P	0 - 20
2320382	Titanium	3.74	Spike	P	0 - 20
2320382	Vanadium	1.63	Spike	P	0 - 20
2320382	Zinc	1.84	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412801

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320382	Aluminum	6.00	Spike	P	0 - 20
2320382	Antimony	0.469	Spike	P	0 - 20
2320382	Arsenic	0.0187	Spike	P	0 - 20
2320382	Barium	0.301	Spike	P	0 - 20
2320382	Beryllium	3.27	Spike	P	0 - 20
2320382	Boron	0.278	Spike	P	0 - 20
2320382	Cadmium	0.865	Spike	P	0 - 20
2320382	Chromium	1.45	Spike	P	0 - 20
2320382	Cobalt	0.0741	Spike	P	0 - 20
2320382	Copper	0.667	Spike	P	0 - 20
2320382	Lead	0.285	Spike	P	0 - 20
2320382	Manganese	0.462	Spike	P	0 - 20
2320382	Molybdenum	0.0205	Spike	P	0 - 20
2320382	Nickel	0.464	Spike	P	0 - 20
2320382	Selenium	0.828	Spike	P	0 - 20
2320382	Silver	1.05	Spike	P	0 - 20
2320382	Thallium	0.908	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320921	Chloride	0.378	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320921	Sulfate	0.527	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320891	Ammonia-N	0.704	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320962	Kjeldahl Nitrogen	1.62	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320891	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320889	Total-P	1.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321061	O-Phosphate-P	1.05	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P412654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321252	Acetochlor	5.41	Spike	P	0 - 27
2321252	Alachlor	0.868	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P412654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321252	Ametryn	11.1	Spike	P	0 - 34
2321252	Atrazine	0.246	Spike	P	0 - 41
2321252	Atrazine Desethyl	5.04	Spike	P	0 - 38
2321252	Azinphos Methyl	0.198	Spike	P	0 - 62
2321252	Azoxystrobin	7.04	Spike	P	0 - 32
2321252	Bromacil	4.39	Spike	P	0 - 30
2321252	Butylate	3.28	Spike	P	0 - 59
2321252	Caffeine	4.67	Spike	P	0 - 60
2321252	Carbophenothion	4.47	Spike	P	0 - 25
2321252	Carfentrazone Ethyl	3.35	Spike	P	0 - 26
2321252	Chlorfenapyr	2.75	Spike	P	0 - 30
2321252	Chlorpyrifos Ethyl	7.25	Spike	P	0 - 27
2321252	Chlorpyrifos Methyl	11.4	Spike	P	0 - 26
2321252	Coumaphos	2.02	Spike	P	0 - 30
2321252	Cyanazine	0.414	Spike	P	0 - 58
2321252	Cyprodinil	0.451	Spike	P	0 - 30
2321252	Demeton	4.22	Spike	P	0 - 25
2321252	Diazinon	4.56	Spike	P	0 - 29
2321252	Difenoconazole	5.68	Spike	P	0 - 25
2321252	Dimethenamid	2.74	Spike	P	0 - 30
2321252	Dimethomorph	6.37	Spike	P	0 - 30
2321252	Disulfoton	4.18	Spike	P	0 - 33
2321252	Dithiopyr	10.3	Spike	P	0 - 22
2321252	EPTC	9.08	Spike	P	0 - 38
2321252	Ethion	4.85	Spike	P	0 - 79
2321252	Ethoprop	4.48	Spike	P	0 - 23
2321252	Etridiazole	6.33	Spike	P	0 - 30
2321252	Fenamiphos	6.50	Spike	P	0 - 58
2321252	Fenbuconazole	1.37	Spike	P	0 - 37
2321252	Fipronil	0.197	Spike	P	0 - 33
2321252	Fipronil Desulfinyl	9.14	Spike	P	0 - 26
2321252	Fipronil Sulfide	4.95	Spike	P	0 - 37
2321252	Fipronil Sulfone	0.591	Spike	P	0 - 50
2321252	Fluazifop-P-butyl	14.5	Spike	P	0 - 24
2321252	Fludioxonil	9.58	Spike	P	0 - 26
2321252	Flumioxazin	1.57	Spike	P	0 - 37
2321252	Flutolanil	1.21	Spike	P	0 - 26
2321252	Fluxapyroxad	1.04	Spike	P	0 - 34
2321252	Fonofos	0.221	Spike	P	0 - 27
2321252	Hexazinone	8.22	Spike	P	0 - 36
2321252	Imazalil	16.1	Spike	P	0 - 65
2321252	Iprodione	1.86	Spike	P	0 - 33
2321252	Loratadine	14.2	Spike	P	0 - 30
2321252	Malathion	7.91	Spike	P	0 - 44
2321252	Metalaxyl	9.04	Spike	P	0 - 38
2321252	Metolachlor	4.28	Spike	P	0 - 36
2321252	Metribuzin	13.5	Spike	P	0 - 63
2321252	Mevinphos	11.7	Spike	P	0 - 26
2321252	Molinate	2.54	Spike	P	0 - 40
2321252	Myclobutanil	2.47	Spike	P	0 - 21
2321252	Naled	5.34	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P412654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2321252	Napropamide	1.04	Spike	P	0 - 30
2321252	Norflurazon	4.71	Spike	P	0 - 24
2321252	Oxadiazon	0.0610	Spike	P	0 - 27
2321252	Oxyfluorfen	1.90	Spike	P	0 - 24
2321252	Parathion Ethyl	1.55	Spike	P	0 - 28
2321252	Parathion Methyl	9.64	Spike	P	0 - 27
2321252	Pendimethalin	1.77	Spike	P	0 - 31
2321252	Phenytoin	3.43	Spike	P	0 - 30
2321252	Phorate	1.94	Spike	P	0 - 27
2321252	Prodiamine	4.97	Spike	P	0 - 52
2321252	Prometon	5.37	Spike	P	0 - 31
2321252	Prometryn	3.36	Spike	P	0 - 28
2321252	Pronamide	10.7	Spike	P	0 - 26
2321252	Propanil	9.70	Spike	P	0 - 30
2321252	Propargite	3.87	Spike	P	0 - 30
2321252	Propiconazole	4.82	Spike	P	0 - 31
2321252	Pyraflufen Ethyl	5.68	Spike	P	0 - 30
2321252	Pyridaben	4.12	Spike	P	0 - 30
2321252	Pyriproxyfen	2.51	Spike	P	0 - 50
2321252	Simazine	6.22	Spike	P	0 - 29
2321252	Stirophos	6.10	Spike	P	0 - 30
2321252	Sulfentrazone	2.49	Spike	P	0 - 33
2321252	Tebuconazole	2.22	Spike	P	0 - 44
2321252	Terbufos	2.29	Spike	P	0 - 29
2321252	Terbuthylazine	4.32	Spike	P	0 - 27
2321252	Thiobencarb	3.30	Spike	P	0 - 30
2321252	Triadimefon	1.72	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P412640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320526	2,4-D	9.65	Spike	P	0 - 30
2320526	2,4,5-T	3.37	Spike	P	0 - 30
2320526	Acetaminophen	5.17	Spike	P	0 - 30
2320526	Acetamiprid	7.84	Spike	P	0 - 30
2320526	Afidopyropen	6.27	Spike	P	0 - 30
2320526	Bentazon	4.42	Spike	P	0 - 30
2320526	Benzovindiflupyr	0.157	Spike	P	0 - 30
2320526	Carbamazepine	4.00	Spike	P	0 - 30
2320526	Clothianidin	4.69	Spike	P	0 - 30
2320526	Dinotefuran	14.7	Spike	P	0 - 30
2320526	Diuron	5.83	Spike	P	0 - 30
2320526	Fenuron	8.55	Spike	P	0 - 30
2320526	Fluridone	8.00	Spike	P	0 - 30
2320526	Hydrocodone	5.60	Spike	P	0 - 30
2320526	Ibuprofen	3.91	Spike	P	0 - 30
2320526	Imazapyr	2.40	Spike	P	0 - 30
2320526	Imidacloprid	9.24	Spike	P	0 - 30
2320526	Linuron	13.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P412640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320526	Mandestrobin	10.2	Spike	P	0 - 30
2320526	MCCP	16.1	Spike	P	0 - 30
2320526	Naproxen	1.36	Spike	P	0 - 30
2320526	Primidone	12.0	Spike	P	0 - 30
2320526	Pyraclostrobin	12.3	Spike	P	0 - 30
2320526	Silvex	7.58	Spike	P	0 - 30
2320526	Thiamethoxam	8.91	Spike	P	0 - 30
2320526	Tolfenpyrad	9.58	Spike	P	0 - 30
2320526	Triclopyr	0.317	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320528	Acesulfame K	2.65	Spike	P	0 - 30
2320528	AMPA	2.48	Spike	P	0 - 30
2320528	Endothall	3.55	Spike	P	0 - 30
2320528	Glufosinate	2.17	Spike	P	0 - 30
2320528	Glyphosate	0.137	Spike	P	0 - 30
2320528	Sucralose	3.90	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P413184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320888	Total Alkalinity	0.974	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P413195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320886	TDS	6.71	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P413189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320888	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320851	Organic Carbon	0.333	Spike	P	0 - 20

Quality Assurance Report

Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2320926

Field Sample ID: G2TLHR0038

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	83.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.4	P	30 - 160
EPA 8321B	Diuron-d6	82.7	P	30 - 160
EPA 8321B	Endothall-d6	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.9	P	30 - 160
EPA 8321B	Primidone-d5	109	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	30 - 160

Lab Sample ID: 2320928

Field Sample ID: G2TLHR0038

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	47.7	P	20 - 200
EPA 8270E	Simazine-d10	85.0	P	71 - 140
EPA 8270E	Terbufos-d10	76.2	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A111612

Included Lab Sample IDs: 2320923

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111613

Included Lab Sample IDs: 2320921

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

Reference Method: DEP SOP: NU-094-1

Run ID: A111614

Included Lab Sample IDs: 2320921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	85 - 115

Reference Method: EPA 8321B

Run ID: A111654

Included Lab Sample IDs: 2320926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.2	97.7	P/P	60 - 160
Sucralose	93.9	96.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111655

Included Lab Sample IDs: 2320926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	109	110	P/P	60 - 160
Endothall	102	104	P/P	60 - 160
Glufosinate	104	107	P/P	60 - 160
Glyphosate	97.7	101	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A111659

Included Lab Sample IDs: 2320922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111697

Included Lab Sample IDs: 2320922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111706

Included Lab Sample IDs: 2320927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	105	P/P	90 - 110
Antimony	105	104	P/P	90 - 110
Arsenic	98.5	97.9	P/P	90 - 110
Beryllium	97.9	96.7	P/P	90 - 110
Boron	105	106	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	101	100	P/P	90 - 110
Cobalt	98.3	99.2	P/P	90 - 110
Copper	97.8	98.6	P/P	90 - 110
Lead	99.1	99.1	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Molybdenum	99.1	98.2	P/P	90 - 110
Nickel	99.7	100	P/P	90 - 110
Selenium	103	101	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	100	99.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111715

Included Lab Sample IDs: 2320921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.1	99.7	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111746

Included Lab Sample IDs: 2320927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.0	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111765

Included Lab Sample IDs: 2320922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111767

Included Lab Sample IDs: 2320926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.5	72.4	P/P	50 - 150
2,4,5-T	78.6	82.4	P/P	50 - 150
Acetaminophen	74.3	73.4	P/P	60 - 160
Acetamiprid	95.2	95.1	P/P	50 - 150
Afidopyropen	77.0	64.0	P/P	50 - 150
Bentazon	93.5	82.4	P/P	50 - 160
Benzovindiflupyr	93.4	95.0	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A111767
Included Lab Sample IDs: 2320926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	90.0	88.5	P/P	60 - 150
Clothianidin	90.6	95.9	P/P	60 - 150
Dinotefuran	79.7	88.0	P/P	50 - 150
Diuron	103	96.5	P/P	60 - 160
Fenuron	95.0	94.8	P/P	60 - 150
Fluridone	102	97.7	P/P	60 - 160
Hydrocodone	93.8	88.3	P/P	60 - 150
Ibuprofen	75.7	73.3	P/P	50 - 160
Imazapyr	76.1	76.1	P/P	50 - 150
Imidacloprid	92.7	90.4	P/P	60 - 150
Linuron	90.6	94.1	P/P	60 - 150
Mandestrobin	93.7	99.6	P/P	50 - 150
MCPP	79.9	71.5	P/P	50 - 150
Naproxen	66.1	66.5	P/P	50 - 160
Primidone	89.9	96.7	P/P	60 - 150
Pyraclostrobin	98.6	98.4	P/P	60 - 150
Silvex	77.2	82.1	P/P	50 - 150
Thiamethoxam	86.3	85.9	P/P	50 - 150
Tolfenpyrad	91.7	89.3	P/P	60 - 150
Triclopyr	83.4	83.8	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111792
Included Lab Sample IDs: 2320927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	107	P/P	90 - 110
Iron	104	107	P/P	90 - 110
Magnesium	103	107	P/P	90 - 110
Potassium	104	106	P/P	90 - 110
Sodium	103	105	P/P	90 - 110
Strontium	102	102	P/P	90 - 110
Tin	101	101	P/P	90 - 110
Titanium	99.9	102	P/P	90 - 110
Vanadium	101	103	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A111799
Included Lab Sample IDs: 2320928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.5		P	80 - 120
Alachlor	94.4		P	80 - 120
Ametryn	89.9		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	89.2		P	80 - 120
Azoxystrobin	99.6		P	80 - 120
Bromacil	97.7		P	80 - 120
Butylate	95.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111799
Included Lab Sample IDs: 2320928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Caffeine	90.9		P	80 - 120
Carbophenothion	84.0		P	80 - 120
Carfentrazone Ethyl	85.4		P	80 - 120
Chlorfenapyr	92.0		P	80 - 120
Chlorpyrifos Ethyl	90.8		P	80 - 120
Chlorpyrifos Methyl	94.4		P	80 - 120
Coumaphos	83.5		P	80 - 120
Cyanazine	100		P	80 - 120
Cyprodinil	91.1		P	80 - 120
Demeton	97.8		P	80 - 120
Diazinon	95.3		P	80 - 120
Difenoconazole	82.5		P	80 - 120
Dimethenamid	99.2		P	80 - 120
Dimethomorph	97.2		P	80 - 120
Disulfoton	95.5		P	80 - 120
Dithiopyr	98.7		P	80 - 120
EPTC	99.1		P	80 - 120
Ethion	95.8		P	80 - 120
Ethoprop	96.5		P	80 - 120
Etridiazole	97.0		P	80 - 120
Fenamiphos	94.4		P	80 - 120
Fenbuconazole	81.7		P	80 - 120
Fipronil	98.7		P	80 - 120
Fipronil Desulfanyl	92.8		P	80 - 120
Fipronil Sulfide	89.6		P	80 - 120
Fipronil Sulfone	87.5		P	80 - 120
Fluazifop-P-butyl	97.6		P	80 - 120
Flumioxazin	83.9		P	80 - 120
Flutolanil	96.2		P	80 - 120
Fluxapyroxad	92.7		P	80 - 120
Fonofos	96.0		P	80 - 120
Hexazinone	97.6		P	80 - 120
Imazalil	87.4		P	80 - 120
Iprodione	89.2		P	80 - 120
Loratadine	114		P	80 - 120
Malathion	88.3		P	80 - 120
Metalaxyl	93.5		P	80 - 120
Metolachlor	97.5		P	80 - 120
Metribuzin	105		P	80 - 120
Mevinphos	104		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	103		P	80 - 120
Naled	91.1		P	80 - 120
Napropamide	95.1		P	80 - 120
Norflurazon	91.2		P	80 - 120
Oxadiazon	104		P	80 - 120
Oxyfluorfen	91.7		P	80 - 120
Parathion Ethyl	101		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	97.3		P	80 - 120
Phenytol	90.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111799
Included Lab Sample IDs: 2320928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Phorate	98.4		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	90.2		P	80 - 120
Prometryn	91.2		P	80 - 120
Pronamide	94.1		P	80 - 120
Propanil	92.8		P	80 - 120
Propargite	91.4		P	80 - 120
Propiconazole	97.0		P	80 - 120
Pyraflufen Ethyl	89.4		P	80 - 120
Pyridaben	81.9		P	80 - 120
Pyriproxyfen	91.7		P	80 - 120
Simazine	100		P	80 - 120
Stirophos	94.3		P	80 - 120
Sulfentrazone	88.9		P	80 - 120
Tebuconazole	89.7		P	80 - 120
Terbufos	99.3		P	80 - 120
Terbutylazine	95.1		P	80 - 120
Thiobencarb	101		P	80 - 120
Triadimefon	92.3		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A111826
Included Lab Sample IDs: 2320921

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	96.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A111826
Included Lab Sample IDs: 2320921

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111973
Included Lab Sample IDs: 2320922

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112057
Included Lab Sample IDs: 2320922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.8	95.2	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	99.4					2.07	
EPA 180.1 Rev. 2.0	Turbidity	95.5					2.04	
EPA 200.7 Rev. 4.4	Calcium	103	99.4	104				0.295
	Iron	106	110	105	108			3.97
	Magnesium	107	107	104	107			2.02
	Potassium	106	105	101	104			2.38
	Sodium	101	97.4	103				1.59
	Strontium	103	103	102	104			1.29
	Tin	103	104	101	103			3.05
	Titanium	101	107	103	103			3.74
	Vanadium	94.8	98.6	97.0	98.4			1.63
	Zinc	99.5	102	100	101			1.84
EPA 200.8 Rev. 5.4	Aluminum	99.7	102	103	110			6.00
	Antimony	101	102	104	104			0.469
	Arsenic	97.5	97.7	96.7	96.7			0.0187
	Barium	101	103	102	101			0.301
	Beryllium	96.4	94.1	95.9	99.4			3.27
	Boron	103	106	110	110			0.278
	Cadmium	98.4	102	102	103			0.865
	Chromium	97.5	99.1	101	103			1.45
	Cobalt	98.0	98.7	97.3	97.4			0.0741
	Copper	96.8	96.6	95.6	96.3			0.667
	Lead	98.4	100	100	101			0.285
	Manganese	98.1	97.5	111	113			0.462
	Molybdenum	98.2	98.0	101	101			0.0205
	Nickel	99.2	98.2	98.7	99.2			0.464
	Selenium	97.6	96.5	96.0	95.2			0.828
	Silver	97.4	97.0	98.8	97.8			1.05
	Thallium	102	104	103	104			0.908
EPA 300.0 Rev. 2.1	Chloride	99.6	98.4	100			0.378	
	Sulfate	98.4	97.3	98.4			0.527	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	98.4	97.6				0.704
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6	102	99.4				1.62
EPA 353.2 Rev. 2.0	NO2NO3-N	97.0	96.5	96.5				0.0
EPA 365.1 Rev. 2.0	Total-P	102	101	103				1.13
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	95.0	96.0				1.05
EPA 8270E	Acetochlor	78.6	92.8	87.9				5.41
	Alachlor	72.3	77.2	76.5				0.868
	Ametryn	69.0	87.2	78.0				11.1
	Atrazine	85.3	91.1	91.4				0.246
	Atrazine Desethyl	47.7	51.6	49.1				5.04
	Azinphos Methyl	115	134	134				0.198
	Azoxystrobin	81.0	92.3	83.4				7.04
	Bromacil	68.8	77.9	74.6				4.39
	Butylate	48.8	56.2	54.4				3.28
	Caffeine	98.8	92.0	96.4				4.67
	Carbophenothion	97.9	102	107				4.47
	Carfentrazone Ethyl	87.0	109	113				3.35
	Chlorfenapyr	77.2	78.4	76.3				2.75
	Chlorpyrifos Ethyl	93.2	87.4	81.3				7.25
	Chlorpyrifos Methyl	103	109	96.9				11.4
	Coumaphos	111	134	131				2.02
	Cyanazine	91.1	105	105				0.414
	Cyprodinil	71.6	82.0	81.6				0.451

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Demeton	73.1	82.6	79.2			4.22
	Diazinon	77.0	93.0	97.3			4.56
	Difenoconazole	109	132	139			5.68
	Dimethenamid	64.8	77.6	75.5			2.74
	Dimethomorph	61.0	74.8	70.2			6.37
	Disulfoton	83.7	89.8	93.6			4.18
	Dithiopyr	78.5	100	90.4			10.3
	EPTC	45.9	45.3	49.6			9.08
	Ethion	84.0	87.2	83.1			4.85
	Ethoprop	69.9	93.3	97.6			4.48
	Etridiazole	53.0	62.3	58.4			6.33
	Fenamiphos	103	95.8	89.8			6.50
	Fenbuconazole	84.2	98.9	100			1.37
	Fipronil	77.2	94.9	94.7			0.197
	Fipronil Desulfinyl	76.1	105	95.4			9.14
	Fipronil Sulfide	76.6	80.1	84.2			4.95
	Fipronil Sulfone	93.9	98.9	98.3			0.591
	Fluazifop-P-butyl	79.4	87.6	101			14.5
	Fludioxonil	78.4	85.3	93.9			9.58
	Flumioxazin	138	183	181			1.57
	Flutolanil	79.0	86.3	85.3			1.21
	Fluxapyroxad	94.6	139	140			1.04
	Fonofos	74.1	91.5	91.3			0.221
	Hexazinone	84.6	102	94.3			8.22
	Imazalil	63.0	43.8	51.5			16.1
	Iprodione	108	147	150			1.86
	Loratadine	54.5	73.8	64.0			14.2
	Malathion	108	109	101			7.91
	Metalaxyl	69.5	81.9	74.8			9.04
	Metolachlor	76.9	84.1	80.3			4.28
	Metribuzin	77.1	96.0	83.8			13.5
	Mevinphos	53.0	76.9	86.5			11.7
	Molinate	59.2	71.6	69.8			2.54
	Myclobutanil	78.0	92.8	95.1			2.47
	Naled	88.1	88.8	84.2			5.34
	Napropamide	72.9	71.5	70.8			1.04
	Norflurazon	76.2	98.1	103			4.71
	Oxadiazon	72.1	64.7	64.8			0.0610
	Oxyfluorfen	85.9	113	115			1.90
	Parathion Ethyl	86.0	90.7	89.3			1.55
	Parathion Methyl	94.5	111	100			9.64
	Pendimethalin	81.9	108	106			1.77
	Phenytoin	63.4	81.3	84.2			3.43
	Phorate	61.2	75.0	73.6			1.94
	Prodiamine	93.4	159	151			4.97
	Prometon	72.9	82.4	78.1			5.37
	Prometryn	70.3	80.9	78.3			3.36
	Pronamide	76.9	101	90.8			10.7
	Propanil	76.9	86.6	78.6			9.70
	Propargite	97.8	118	114			3.87
	Propiconazole	81.2	108	103			4.82
	Pyraflufen Ethyl	87.6	112	118			5.68
	Pyridaben	105	115	110			4.12
	Pyriproxyfen	99.9	117	114			2.51

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Simazine	83.4	94.6	88.9			6.22
	Stirophos	101	98.9	93.1			6.10
	Sulfentrazone	72.9	121	124			2.49
	Tebuconazole	91.2	112	115			2.22
	Terbufos	92.8	107	110			2.29
	Terbutylazine	74.2	82.8	86.5			4.32
	Thiobencarb	77.1	85.7	83.0			3.30
	Triadimefon	65.7	71.9	73.2			1.72
EPA 8321B	2,4-D	74.1	76.1	88.7			9.65
	2,4,5-T	65.1	67.4	69.8			3.37
	Acesulfame K	103	94.5	92.1			2.65
	Acetaminophen	48.9	93.0	98.0			5.17
	Acetamiprid	89.6	85.5	92.5			7.84
	Afidopyropen	58.7	52.7	56.1			6.27
	AMPA	108	73.6	71.0			2.48
	Bentazon	46.5	43.8	58.3			4.42
	Benzovindiflupyr	79.1	78.2	78.1			0.157
	Carbamazepine	81.1	80.4	83.9			4.00
	Clothianidin	88.6	110	116			4.69
	Dinotefuran	76.6	106	123			14.7
	Diuron	79.7	71.7	76.4			5.83
	Endothall	101	99.8	96.4			3.55
	Fenuron	102	88.2	96.1			8.55
	Fluridone	84.0	75.5	82.7			8.00
	Glufosinate	108	80.6	82.3			2.17
	Glyphosate	97.9	68.3	68.5			0.137
	Hydrocodone	87.5	92.9	98.2			5.60
	Ibuprofen	75.0	57.8	60.1			3.91
	Imazapyr	85.1	122	111			2.40
	Imidacloprid	88.1	151	166			9.24
	Linuron	68.0	59.7	68.6			13.9
	Mandestrobin	78.2	76.2	84.4			10.2
	MCPP	82.2	86.9	102			16.1
	Naproxen	55.2	79.9	78.8			1.36
	Primidone	83.6	96.5	109			12.0
	Pyraclostrobin	83.9	83.3	94.1			12.3
	Silvex	65.0	62.8	67.8			7.58
	Sucralose	96.1	105	100			3.90
	Thiamethoxam	85.9	137	150			8.91
	Tolfenpyrad	48.7	44.5	49.0			9.58
	Triclopyr	73.0	71.4	71.6			0.317
SM 2320 B-2011	Total Alkalinity	101				0.974	
SM 2540 C-2011	TDS					6.71	
SM 4500-F- C-2011	Fluoride	101	102	102			0.0
SM 5310 B-2011	Organic Carbon	95.1	98.4	97.8			0.333

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2320921
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2320921
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2320927

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	2320927
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2320921
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2320921
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2320922
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2320922
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2320922
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2320922
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2320923
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2320928
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2320926
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2320921
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2320927
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2320921
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2320921
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2320921
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2320922

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	04/20/2022			04/21/2022 17:24	Samantha L Bates	2320921
EPA 180.1 Rev. 2.0	04/20/2022			04/21/2022 14:34	Khloe J Berg	2320921
EPA 200.7 Rev. 4.4	04/20/2022	04/25/2022 10:30	Megan Whitefoot	04/29/2022 02:30	Josef B Mick	2320927
EPA 200.8 Rev. 5.4	04/20/2022	04/25/2022 10:30	Megan Whitefoot	04/26/2022 17:37	Alexander Thompson	2320927
	04/20/2022	04/25/2022 10:30	Megan Whitefoot	04/27/2022 15:49	Emily M Philpot	2320927
EPA 300.0 Rev. 2.1	04/20/2022			04/27/2022 17:47	James L Waggeberby	2320921
EPA 350.1 Rev. 2.0	04/20/2022			04/28/2022 14:04	Judith K. Clark	2320922
EPA 351.2 Rev. 2.0	04/20/2022	05/10/2022 14:32	Samantha L Bates	05/11/2022 09:18	Samantha L Bates	2320922
EPA 353.2 Rev. 2.0	04/20/2022			04/26/2022 14:10	Nathaniel J Jones	2320922
EPA 365.1 Rev. 2.0	04/20/2022	05/04/2022 17:30	Simonne.V. Calhoun	05/06/2022 14:41	James L Waggeberby	2320922
EPA 365.1 Rev. 2.0 dissolved	04/20/2022			04/21/2022 15:34	Nathaniel J Jones	2320923
EPA 8270E	04/20/2022	04/22/2022 08:00	Fe-Val Siddell	04/28/2022 20:42	Michael Poppell	2320928
EPA 8321B	04/20/2022	04/21/2022 09:00	June Rhew	04/23/2022 06:08	Juyoung Kim	2320926
	04/20/2022	04/22/2022 10:00	Manjita Shrestha	04/23/2022 00:10	Manjita Shrestha	2320926
	04/20/2022	04/22/2022 10:00	Manjita Shrestha	04/23/2022 23:01	Manjita Shrestha	2320926
SM 2320 B-2011	04/20/2022			04/30/2022 18:42	Dale L. Simmons	2320921
SM 2340 B-2011	04/20/2022			04/29/2022 02:30	Josef B Mick	2320927
SM 2540 C-2011	04/20/2022			04/22/2022 15:36	Yijie Li	2320921
SM 2540 D-2011	04/20/2022			04/22/2022 15:36	Yijie Li	2320921
SM 4500-F- C-2011	04/20/2022			04/30/2022 18:42	Dale L. Simmons	2320921
SM 5310 B-2011	04/20/2022			04/23/2022 05:15	Khloe J Berg	2320922