

Chemical Analysis Report

TLH-ROC-2022-06-07-01

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-2022-05-30-18**
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: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 24-JUN-2022 13:19

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Big Creek @ SR65

Collection Date/Time: 06/07/2022 09:00

Field ID: G1TLHR0056

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332669	DEP SOP: NU-094-1	Color (true)**	140		PCU	P414838	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P414848	
	EPA 300.0 Rev. 2.1	Chloride	1.8	A	mg Cl/L	P415410	
		Sulfate	0.79	A	mg SO4/L	P415415	
	SM 2320 B-2011	Total Alkalinity	1.0	U	mg CaCO3/L	P415388	
	SM 2540 C-2011	TDS	29		mg/L	P415243	
	SM 2540 D-2011	TSS	4	I	mg/L	P415246	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P415393	
2332670	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P415487	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P415097	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.31		mg N/L	P415492	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P415013	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P414935	
2332671	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P414840	
2332675	EPA 8321B	2,4-D	0.0020	U	ug/L	P414890	
		Acesulfame K	0.10	U	ug/L	P414771	
		2,4,5-T	0.0040	U	ug/L	P414890	
		AMPA	0.10	U	ug/L	P414771	
		Acetaminophen	0.0080	U	ug/L	P414890	
		Acetamiprid	0.0020	U	ug/L	P414890	
		Endothall	0.25	U	ug/L	P414771	
		Glufosinate	0.10	U	ug/L	P414771	
		Glyphosate	0.10	U	ug/L	P414771	
		Afidopyropen	0.0020	U	ug/L	P414890	
		Bentazon	8.0E-04	U	ug/L	P414890	
		Sucralose	0.010	U	ug/L	P414771	
		Benzovindiflupyr	0.0020	U	ug/L	P414890	
		Carbamazepine	8.0E-04	U	ug/L	P414890	
		Clothianidin	0.0020	U	ug/L	P414890	
		Dinotefuran	0.0020	U	ug/L	P414890	
		Diuron	0.0020	U	ug/L	P414890	
		Fenuron	0.032	U	ug/L	P414890	
		Fluridone	8.0E-04	U	ug/L	P414890	
		Imazapyr	0.0040	U	ug/L	P414890	
		Hydrocodone	0.0020	U	ug/L	P414890	
		Ibuprofen	0.080	U	ug/L	P414890	
		Imidacloprid	0.0020	U	ug/L	P414890	
		Linuron	0.0040	U	ug/L	P414890	
		Mandestrobin	0.0020	U	ug/L	P414890	
		MCP	0.0040	U	ug/L	P414890	
		Naproxen	0.0080	U	ug/L	P414890	
		Primidone	0.0040	U	ug/L	P414890	
		Pyraclostrobin	0.0020	U	ug/L	P414890	

Field ID: G1TLHR0056

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332675	EPA 8321B	Silvex	0.0040	U	ug/L	P414890	
		Thiamethoxam	0.0020	U	ug/L	P414890	
		Tolfenpyrad	0.0020	U	ug/L	P414890	
		Triclopyr	0.0040	U	ug/L	P414890	
2332676	EPA 200.7 Rev. 4.4	Calcium	1.15		mg/L	P415009	
		Iron	180		ug/L	P415009	
		Magnesium	0.43		mg/L	P415009	
		Potassium	0.30	U	mg/L	P415009	
		Sodium	1.1	I	mg/L	P415009	
		Strontium	6.8	I	ug/L	P415009	
		Tin	3.0	U	ug/L	P415009	
		Titanium	4.4		ug/L	P415009	
		Vanadium	2.0	U	ug/L	P415009	
		Zinc	5.0	U	ug/L	P415009	
	EPA 200.8 Rev. 5.4	Aluminum	266		ug/L	P415208	
		Antimony	0.050	U	ug/L	P415009	
		Arsenic	0.18	I	ug/L	P415009	
		Barium	6.22		ug/L	P415009	
		Beryllium	0.019	I	ug/L	P415009	
		Boron**	7.7	I	ug/L	P415009	
		Cadmium	0.020	U	ug/L	P415009	
		Chromium	0.40	U	ug/L	P415009	
		Cobalt	0.097		ug/L	P415009	
		Copper	0.40	U	ug/L	P415009	
		Lead	0.21	I	ug/L	P415009	
		Manganese	12.6		ug/L	P415009	
		Molybdenum	0.15	U	ug/L	P415009	
		Nickel	0.50	U	ug/L	P415009	
		Selenium	0.20	U	ug/L	P415009	
		Silver	0.010	U	ug/L	P415009	
		Thallium	0.10	U	ug/L	P415009	
		Hardness	4.6		mg/L	P415009	
	SM 2340 B-2011						
2332677	EPA 8270E	Acetochlor	0.24	U	ng/L	P415071	
		Alachlor	0.24	U	ng/L	P415071	
		Ametryn	0.58	U	ng/L	P415071	
		Atrazine	0.24	U	ng/L	P415071	
		Atrazine Desethyl	1.5	U	ng/L	P415071	
		Azinphos Methyl	1.9	U	ng/L	P415071	
		Azoxystrobin**	0.48	U	ng/L	P415071	
		Bromacil	0.48	U	ng/L	P415071	
		Butylate	0.39	U	ng/L	P415071	
		Caffeine**	7.3	U	ng/L	P415071	
		Carbophenothion	0.19	U	ng/L	P415071	
		Carfentrazone Ethyl**	0.097	U	ng/L	P415071	
		Chlorfenapyr**	0.17	U	ng/L	P415071	

Field ID: G1TLHR0056

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332677	EPA 8270E	Chlorpyrifos Ethyl	0.24	U	ng/L	P415071	
		Chlorpyrifos Methyl	0.048	U	ng/L	P415071	
		Coumaphos**	0.48	U	ng/L	P415071	
		Cyanazine	3.1	U	ng/L	P415071	
		Cyprodinil**	0.097	U	ng/L	P415071	
		Demeton	1.5	U	ng/L	P415071	
		Diazinon	0.12	U	ng/L	P415071	
		Difenoconazole**	0.58	U	ng/L	P415071	
		Dimethenamid**	0.097	U	ng/L	P415071	
		Dimethomorph**	0.17	U	ng/L	P415071	
		Disulfoton	0.48	U	ng/L	P415071	
		Dithiopyr**	0.17	U	ng/L	P415071	
		EPTC	1.2	U	ng/L	P415071	
		Ethion	0.15	U	ng/L	P415071	
		Ethoprop	0.097	U	ng/L	P415071	
		Etridiazole**	0.15	U	ng/L	P415071	
		Fenamiphos	0.48	U	ng/L	P415071	
		Fenbuconazole**	0.12	U	ng/L	P415071	
		Fipronil	0.24	U	ng/L	P415071	
		Fipronil Desulfinyl**	0.12	U	ng/L	P415071	
		Fipronil Sulfide	0.15	U	ng/L	P415071	
		Fipronil Sulfone	0.15	U	ng/L	P415071	
		Fluazifop-P-butyl**	0.097	U	ng/L	P415071	
		Fludioxonil**	0.12	U	ng/L	P415071	
		Flumioxazin**	1.7	U	ng/L	P415071	
		Flutolanil**	0.097	U	ng/L	P415071	
		Fluxapyroxad**	0.097	U	ng/L	P415071	
		Fonofos	0.19	U	ng/L	P415071	
		Hexazinone	26		ng/L	P415071	
		Imazalil**	0.73	U	ng/L	P415071	
		Iprodione**	0.58	U	ng/L	P415071	
		Loratadine**	0.097	U	ng/L	P415071	
		Malathion	0.34	U	ng/L	P415071	
		Metalaxyl	0.73	U	ng/L	P415071	
		Metolachlor	0.34	U	ng/L	P415071	
		Metribuzin	2.4	U	ng/L	P415071	
		Mevinphos	1.0	U	ng/L	P415071	
		Molinate	0.29	U	ng/L	P415071	
		Myclobutanil**	0.24	U	ng/L	P415071	
		Naled**	1.5	UJ	ng/L	P415071	LCS
		Napropamide**	0.39	U	ng/L	P415071	
		Norflurazon	0.48	U	ng/L	P415071	
		Oxadiazon	0.29	U	ng/L	P415071	
		Oxyfluorfen**	0.15	U	ng/L	P415071	
		Parathion Ethyl	0.24	U	ng/L	P415071	

Field ID: G1TLHR0056

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332677	EPA 8270E	Parathion Methyl	0.53	U	ng/L	P415071	
		Pendimethalin	0.97	U	ng/L	P415071	
		Phenytol**	3.4	U	ng/L	P415071	
		Phorate	0.51	U	ng/L	P415071	
		Prodiamine**	0.17	U	ng/L	P415071	
		Prometon	0.87	U	ng/L	P415071	
		Prometryn	0.19	U	ng/L	P415071	
		Pronamide**	0.15	U	ng/L	P415071	
		Propanil**	0.12	U	ng/L	P415071	
		Propargite**	1.5	U	ng/L	P415071	
		Propiconazole**	0.48	U	ng/L	P415071	
		Pyraflufen Ethyl**	0.24	U	ng/L	P415071	
		Pyridaben**	0.44	U	ng/L	P415071	
		Pyriproxyfen**	0.12	U	ng/L	P415071	
		Simazine	0.48	U	ng/L	P415071	
		Stirophos**	0.12	UJ	ng/L	P415071	LCS, MS, RPD
		Sulfentrazone**	0.48	U	ng/L	P415071	
		Tebuconazole**	0.48	U	ng/L	P415071	
		Terbufos	0.097	U	ng/L	P415071	
		Terbutylazine	0.41	U	ng/L	P415071	
		Thiobencarb**	0.58	U	ng/L	P415071	
		Triadimefon**	0.24	U	ng/L	P415071	

Ref. Method and Comment:

SM 2320 B-2011: The MDL was elevated due to analytical difficulties.

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 8270E: MS accuracy for atrazine and metolachlor not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P414838

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414848

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415009

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: P415009

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P415208

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415410

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415415

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415487

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415097

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415492

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415013

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414840

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

Reference Method: EPA 8270E
Batch ID: P415071

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	2.5	U	ng/L
Metribuzin	2.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
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
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
Terbutylazine	0.42	U	ng/L
Terbutylazine	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: P414771

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P414771

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

Reference Method: EPA 8321B

Batch ID: P414890

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P415388

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO3/L

Reference Method: SM 2540 C-2011

Batch ID: P415243

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P415246

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415393

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414935

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: P414838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.7		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	106		P	85 - 115
Sodium	102		P	85 - 115
Strontium	103		P	85 - 115
Tin	100		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	94.3		P	85 - 115
Zinc	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	99.7		P	85 - 115
Arsenic	101		P	85 - 115
Barium	103		P	85 - 115
Beryllium	96.5		P	85 - 115
Boron	106		P	85 - 115
Cadmium	97.8		P	85 - 115
Chromium	95.9		P	85 - 115
Cobalt	99.1		P	85 - 115
Copper	99.1		P	85 - 115
Lead	101		P	85 - 115
Manganese	96.6		P	85 - 115
Molybdenum	99.2		P	85 - 115
Nickel	100		P	85 - 115
Selenium	98.6		P	85 - 115
Silver	99.4		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415208

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415410

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415415

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415487

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415097

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: P415492

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415013

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: P414840

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

Reference Method: EPA 8270E
Batch ID: P415071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	111		P	70 - 121
Alachlor	100		P	68 - 119
Ametryn	118		P	64 - 139
Atrazine	98.4		P	76 - 120
Atrazine Desethyl	69.9		P	44 - 126
Azinphos Methyl	170		P	43 - 192
Azoxystrobin	96.9		P	36 - 224
Bromacil	95.7		P	52 - 121
Butylate	41.7		P	28 - 91.0
Caffeine	74.0		P	50 - 134

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbophenothion	95.9		P	56 - 129
Carfentrazone Ethyl	129		P	60 - 141
Chlorfenapyr	81.8		P	56 - 115
Chlorpyrifos Ethyl	82.6		P	60 - 118
Chlorpyrifos Methyl	82.3		P	68 - 119
Coumaphos	114		P	18 - 250
Cyanazine	159		P	61 - 250
Cyprodinil	111		P	55 - 145
Demeton	64.4		P	30 - 159
Diazinon	107		P	70 - 123
Difenoconazole	197		P	49 - 204
Dimethenamid	93.4		P	64 - 115
Dimethomorph	77.1		P	12 - 219
Disulfoton	75.9		P	44 - 125
Dithiopyr	104		P	64 - 115
EPTC	44.1		P	28 - 86.0
Ethion	73.7		P	33 - 125
Ethoprop	71.1		P	64 - 116
Etridiazole	67.5		P	34 - 91.0
Fenamiphos	87.9		P	12 - 127
Fenbuconazole	146		P	59 - 151
Fipronil	108		P	67 - 129
Fipronil Desulfinyl	105		P	65 - 127
Fipronil Sulfide	78.5		P	61 - 116
Fipronil Sulfone	86.1		P	55 - 117
Fluazifop-P-butyl	103		P	62 - 127
Fludioxonil	112		P	62 - 128
Flumioxazin	222		P	33 - 250
Flutolanil	97.3		P	56 - 127
Fluxapyroxad	84.3		P	45 - 128
Fonofos	72.2		P	62 - 111
Hexazinone	98.0		P	46 - 139
Imazalil	94.2		P	38 - 142
Iprodione	107		P	47 - 135
Loratadine	69.4		P	10 - 244
Malathion	101		P	61 - 139
Metalaxyl	96.0		P	10 - 119
Metolachlor	106		P	65 - 118
Metribuzin	91.5		P	51 - 250
Mevinphos	58.6		P	53 - 121
Molinate	55.9		P	42 - 96.0
Myclobutanil	110		P	55 - 128
Naled	105		F	10 - 98.0
Napropamide	86.0		P	49 - 121
Norflurazon	117		P	61 - 126
Oxadiazon	90.7		P	59 - 116
Oxyfluorfen	129		P	64 - 137
Parathion Ethyl	89.9		P	70 - 112
Parathion Methyl	106		P	76 - 133
Pendimethalin	81.7		P	52 - 117
Phenytion	112		P	10 - 199
Phorate	50.8		P	48 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prodiamine	98.4		P	26 - 142
Prometon	107		P	43 - 123
Prometryn	102		P	66 - 127
Pronamide	112		P	75 - 121
Propanil	88.5		P	45 - 150
Propargite	145		P	42 - 208
Propiconazole	110		P	60 - 125
Pyraflufen Ethyl	117		P	70 - 138
Pyridaben	99.3		P	35 - 245
Pyriproxyfen	142		P	30 - 149
Simazine	98.6		P	72 - 125
Stirophos	16.8		F	29 - 164
Sulfentrazone	139		P	21 - 139
Tebuconazole	58.1		P	10 - 115
Terbufos	80.0		P	60 - 123
Terbutylazine	89.8		P	72 - 115
Thiobencarb	96.6		P	31 - 139
Triadimefon	87.4		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P414771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	140		P	40 - 150
AMPA	88.9		P	40 - 150
Endothall	75.1		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	90.7		P	40 - 150
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.2		P	40 - 150
2,4,5-T	79.4		P	40 - 150
Acetaminophen	92.8		P	30 - 150
Acetamiprid	74.0		P	40 - 150
Afidopyropen	66.4		P	30 - 150
Bentazon	114		P	30 - 150
Benzovindiflupyr	59.5		P	40 - 150
Carbamazepine	79.6		P	40 - 150
Clothianidin	93.6		P	40 - 150
Dinotefuran	91.0		P	40 - 150
Diuron	79.5		P	40 - 150
Fenuron	88.9		P	40 - 150
Fluridone	88.0		P	40 - 150
Hydrocodone	86.9		P	40 - 150
Ibuprofen	97.7		P	40 - 150
Imazapyr	108		P	40 - 150
Imidacloprid	85.0		P	40 - 150
Linuron	67.0		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P414890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mandestrobin	63.8		P	40 - 150
MCP	107		P	40 - 150
Naproxen	98.2		P	40 - 150
Primidone	91.4		P	40 - 150
Pyraclostrobin	52.0		P	40 - 150
Silvex	67.5		P	40 - 150
Thiamethoxam	88.7		P	40 - 150
Tolfenpyrad	37.1		P	30 - 150
Triclopyr	76.8		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P415388

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

Reference Method: SM 4500-F- C-2011
Batch ID: P415393

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332350	Calcium	101		P	80 - 120
2332350	Iron	102	105	P/P	80 - 120
2332350	Magnesium	101	102	P/P	80 - 120
2332350	Potassium	103	104	P/P	80 - 120
2332350	Sodium	101		P	80 - 120
2332350	Strontium	104	104	P/P	80 - 120
2332350	Tin	97.9	99.3	P/P	80 - 120
2332350	Titanium	104	113	P/P	80 - 120
2332350	Vanadium	96.1	96.5	P/P	80 - 120
2332350	Zinc	98.1	98.9	P/P	80 - 120
2332352	Calcium	98.8		P	80 - 120
2332352	Iron	103		P	80 - 120
2332352	Magnesium	104		P	80 - 120
2332352	Potassium	111		P	80 - 120
2332352	Sodium	102		P	80 - 120
2332352	Strontium	105		P	80 - 120
2332352	Tin	103		P	80 - 120
2332352	Titanium	101		P	80 - 120
2332352	Vanadium	97.5		P	80 - 120
2332352	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332350	Antimony	97.7	100	P/P	80 - 120
2332350	Arsenic	98.9	101	P/P	80 - 120
2332350	Barium	101	104	P/P	80 - 120
2332350	Beryllium	96.6	98.6	P/P	80 - 120
2332350	Boron	107	108	P/P	80 - 120
2332350	Cadmium	98.1	101	P/P	80 - 120
2332350	Chromium	99.2	100	P/P	80 - 120
2332350	Cobalt	98.1	99.3	P/P	80 - 120
2332350	Copper	97.7	99.0	P/P	80 - 120
2332350	Lead	100	102	P/P	80 - 120
2332350	Molybdenum	99.7	101	P/P	80 - 120
2332350	Nickel	100	102	P/P	80 - 120
2332350	Selenium	96.7	97.7	P/P	80 - 120
2332350	Silver	98.5	99.2	P/P	80 - 120
2332350	Thallium	102	105	P/P	80 - 120
2332352	Antimony	101		P	80 - 120
2332352	Arsenic	100		P	80 - 120
2332352	Barium	104		P	80 - 120
2332352	Beryllium	95.3		P	80 - 120
2332352	Boron	105		P	80 - 120
2332352	Cadmium	101		P	80 - 120
2332352	Chromium	97.4		P	80 - 120
2332352	Cobalt	99.4		P	80 - 120
2332352	Copper	100		P	80 - 120
2332352	Lead	102		P	80 - 120
2332352	Manganese	99.7		P	80 - 120
2332352	Molybdenum	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332352	Nickel	102		P	80 - 120
2332352	Selenium	98.4		P	80 - 120
2332352	Silver	100		P	80 - 120
2332352	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332374	Aluminum	102	99.5	P/P	80 - 120
2333022	Aluminum	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332669	Chloride	100		P	90 - 110
2332812	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332669	Sulfate	99.2		P	90 - 110
2332812	Sulfate	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332814	Ammonia-N	109	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415097

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333139	Kjeldahl Nitrogen	95.1	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332654	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332685	Total-P	103	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P414840

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332284	O-Phosphate-P	96.6	96.9	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P415071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332309	Acetochlor	88.5	106	P/P	65 - 124
2332309	Alachlor	83.7	96.4	P/P	61 - 121
2332309	Ametryn	108	108	P/P	52 - 216
2332309	Atrazine Desethyl	50.1	61.9	P/P	15 - 160
2332309	Azinphos Methyl	143	170	P/P	40 - 292
2332309	Azoxystrobin	70.1	109	P/P	12 - 242
2332309	Bromacil	79.3	96.5	P/P	54 - 167
2332309	Butylate	42.4	54.1	P/P	14 - 94.0
2332309	Caffeine	88.8	83.6	P/P	10 - 226
2332309	Carbophenothion	88.4	99.7	P/P	49 - 122
2332309	Carfentrazone Ethyl	108	125	P/P	53 - 138
2332309	Chlorfenapyr	81.0	85.7	P/P	50 - 150
2332309	Chlorpyrifos Ethyl	75.6	82.4	P/P	52 - 122
2332309	Chlorpyrifos Methyl	80.2	86.5	P/P	66 - 117
2332309	Coumaphos	110	113	P/P	50 - 220
2332309	Cyanazine	94.0	113	P/P	43 - 245
2332309	Cyprodinil	93.4	103	P/P	50 - 150
2332309	Demeton	77.4	84.7	P/P	43 - 188
2332309	Diazinon	88.5	99.9	P/P	69 - 131
2332309	Difenoconazole	174	196	P/P	34 - 231
2332309	Dimethenamid	82.1	91.6	P/P	55 - 118
2332309	Dimethomorph	78.6	82.9	P/P	50 - 150
2332309	Disulfoton	80.4	84.6	P/P	38 - 141
2332309	Dithiopyr	87.6	94.9	P/P	42 - 116
2332309	EPTC	36.2	52.3	P/P	18 - 85.0
2332309	Ethion	75.8	76.3	P/P	10 - 131
2332309	Ethoprop	71.9	81.3	P/P	65 - 129
2332309	Etridiazole	52.2	63.5	P/P	50 - 150
2332309	Fenamiphos	95.0	99.3	P/P	31 - 137
2332309	Fenbuconazole	126	148	P/P	57 - 160
2332309	Fipronil	91.9	106	P/P	62 - 132
2332309	Fipronil Desulfinyl	85.5	99.0	P/P	57 - 131
2332309	Fipronil Sulfide	78.1	83.6	P/P	15 - 138
2332309	Fipronil Sulfone	85.6	92.3	P/P	21 - 134
2332309	Fluazifop-P-butyl	84.7	98.0	P/P	54 - 133
2332309	Fludioxonil	88.9	111	P/P	58 - 127
2332309	Flumioxazin	202	228	P/P	33 - 300
2332309	Flutolanil	82.6	95.3	P/P	42 - 130
2332309	Fluxapyroxad	62.7	84.0	P/P	23 - 141
2332309	Fonofos	73.6	75.7	P/P	58 - 119
2332309	Hexazinone	89.4	98.2	P/P	68 - 172
2332309	Imazalil	79.1	107	P/P	48 - 283
2332309	Iprodione	103	113	P/P	38 - 140
2332309	Loratadine	73.1	75.0	P/P	50 - 150
2332309	Malathion	97.3	107	P/P	40 - 137
2332309	Metalaxyl	79.8	88.0	P/P	21 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P415071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332309	Metribuzin	105	120	P/P	38 - 187
2332309	Mevinphos	65.6	69.0	P/P	54 - 134
2332309	Molinate	51.1	65.8	P/P	41 - 97.0
2332309	Myclobutanil	95.1	110	P/P	56 - 125
2332309	Naled	92.5	108	P/P	10 - 108
2332309	Napropamide	76.9	82.4	P/P	50 - 150
2332309	Norflurazon	102	115	P/P	32 - 122
2332309	Oxadiazon	78.0	85.4	P/P	40 - 119
2332309	Oxyfluorfen	114	122	P/P	61 - 153
2332309	Parathion Ethyl	81.7	93.3	P/P	59 - 130
2332309	Parathion Methyl	103	113	P/P	65 - 155
2332309	Pendimethalin	90.4	101	P/P	49 - 138
2332309	Phenytoin	95.3	107	P/P	50 - 200
2332309	Phorate	72.7	83.1	P/P	54 - 161
2332309	Prodiamine	91.9	106	P/P	33 - 161
2332309	Prometon	71.8	82.6	P/P	48 - 140
2332309	Prometryn	93.3	96.5	P/P	55 - 134
2332309	Pronamide	99.3	111	P/P	66 - 137
2332309	Propanil	76.2	85.6	P/P	50 - 150
2332309	Propargite	117	142	P/P	50 - 200
2332309	Propiconazole	86.7	107	P/P	36 - 150
2332309	Pyraflufen Ethyl	98.5	113	P/P	50 - 150
2332309	Pyridaben	93.4	97.9	P/P	50 - 200
2332309	Pyriproxyfen	120	145	P/P	10 - 165
2332309	Simazine	93.6	106	P/P	57 - 145
2332309	Stiropfos	81.4	30.2	P/F	50 - 150
2332309	Sulfentrazone	94.4	109	P/P	34 - 140
2332309	Tebuconazole	56.9	63.2	P/P	10 - 127
2332309	Terbufos	80.9	92.1	P/P	59 - 138
2332309	Terbuthylazine	82.4	91.9	P/P	68 - 119
2332309	Thiobencarb	79.7	92.3	P/P	50 - 150
2332309	Triadimefon	70.7	69.6	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P414771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331315	Acesulfame K	125	127	P/P	40 - 150
2331315	AMPA	67.0	61.8	P/P	40 - 150
2331315	Endothall	72.4	72.9	P/P	40 - 150
2331315	Glufosinate	92.8	82.8	P/P	40 - 150
2331315	Glyphosate	79.9	97.2	P/P	40 - 150
2331315	Sucralose	108	112	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P414890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333031	2,4-D	113	101	P/P	40 - 150
2333031	2,4,5-T	103	84.0	P/P	40 - 150
2333031	Acetaminophen	125	105	P/P	30 - 150
2333031	Acetamiprid	98.4	84.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P414890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333031	Afidopyropen	89.5	78.1	P/P	30 - 150
2333031	Bentazon	123	102	P/P	30 - 150
2333031	Benzovindiflupyr	66.6	59.0	P/P	40 - 150
2333031	Carbamazepine	95.9	82.7	P/P	40 - 150
2333031	Clothianidin	110	93.9	P/P	40 - 150
2333031	Dinotefuran	123	103	P/P	40 - 150
2333031	Diuron	93.9	79.9	P/P	40 - 150
2333031	Fenuron	97.3	83.3	P/P	40 - 150
2333031	Fluridone	102	89.1	P/P	40 - 150
2333031	Hydrocodone	108	90.7	P/P	40 - 150
2333031	Ibuprofen	92.5	95.2	P/P	40 - 150
2333031	Imazapyr	135	114	P/P	40 - 150
2333031	Imidacloprid	113	88.2	P/P	40 - 150
2333031	Linuron	77.4	70.0	P/P	40 - 150
2333031	Mandestrobin	70.0	62.8	P/P	40 - 150
2333031	MCPP	139	116	P/P	40 - 150
2333031	Naproxen	100	75.2	P/P	40 - 150
2333031	Primidone	111	101	P/P	40 - 150
2333031	Pyraclostrobin	63.7	56.5	P/P	40 - 150
2333031	Silvex	97.3	76.0	P/P	40 - 150
2333031	Thiamethoxam	105	90.9	P/P	40 - 150
2333031	Tolfenpyrad	42.1	37.4	P/P	30 - 150
2333031	Triclopyr	103	78.3	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P415393

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333178	Fluoride	103	103	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P414935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332514	Organic Carbon	94.2	94.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P414838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332651	Color (true)	1.45	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332331	Turbidity	1.74	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332350	Calcium	2.31	Spike	P	0 - 20
2332350	Iron	2.61	Spike	P	0 - 20
2332350	Magnesium	1.02	Spike	P	0 - 20
2332350	Potassium	0.864	Spike	P	0 - 20
2332350	Sodium	1.16	Spike	P	0 - 20
2332350	Strontium	0.0407	Spike	P	0 - 20
2332350	Tin	1.39	Spike	P	0 - 20
2332350	Titanium	7.49	Spike	P	0 - 20
2332350	Vanadium	0.405	Spike	P	0 - 20
2332350	Zinc	0.759	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332350	Antimony	2.59	Spike	P	0 - 20
2332350	Arsenic	2.27	Spike	P	0 - 20
2332350	Barium	2.05	Spike	P	0 - 20
2332350	Beryllium	1.81	Spike	P	0 - 20
2332350	Boron	1.45	Spike	P	0 - 20
2332350	Cadmium	3.11	Spike	P	0 - 20
2332350	Chromium	1.31	Spike	P	0 - 20
2332350	Cobalt	1.23	Spike	P	0 - 20
2332350	Copper	1.23	Spike	P	0 - 20
2332350	Lead	1.43	Spike	P	0 - 20
2332350	Manganese	1.35	Spike	P	0 - 20
2332350	Molybdenum	0.894	Spike	P	0 - 20
2332350	Nickel	1.17	Spike	P	0 - 20
2332350	Selenium	1.05	Spike	P	0 - 20
2332350	Silver	0.742	Spike	P	0 - 20
2332350	Thallium	2.48	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332374	Aluminum	2.15	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332669	Chloride	2.74	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332669	Sulfate	1.25	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332814	Ammonia-N	0.323	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333139	Kjeldahl Nitrogen	2.64	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332654	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332685	Total-P	0.644	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414840

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332284	O-Phosphate-P	0.279	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P415071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332309	Acetochlor	15.3	Spike	P	0 - 27
2332309	Alachlor	14.1	Spike	P	0 - 27
2332309	Ametryn	0.402	Spike	P	0 - 34
2332309	Atrazine	11.6	Spike	P	0 - 41
2332309	Atrazine Desethyl	16.2	Spike	P	0 - 38
2332309	Azinphos Methyl	17.1	Spike	P	0 - 62
2332309	Azoxystrobin	22.0	Spike	P	0 - 32
2332309	Bromacil	19.6	Spike	P	0 - 30
2332309	Butylate	24.2	Spike	P	0 - 59
2332309	Caffeine	5.89	Spike	P	0 - 60
2332309	Carbophenothion	12.0	Spike	P	0 - 25
2332309	Carfentrazone Ethyl	14.6	Spike	P	0 - 26
2332309	Chlorfenapyr	5.60	Spike	P	0 - 30
2332309	Chlorpyrifos Ethyl	8.59	Spike	P	0 - 27
2332309	Chlorpyrifos Methyl	7.54	Spike	P	0 - 26
2332309	Coumaphos	2.88	Spike	P	0 - 30
2332309	Cyanazine	18.5	Spike	P	0 - 58
2332309	Cyprodinil	8.78	Spike	P	0 - 30
2332309	Demeton	9.01	Spike	P	0 - 25
2332309	Diazinon	12.1	Spike	P	0 - 29
2332309	Difenoconazole	10.4	Spike	P	0 - 25
2332309	Dimethenamid	11.0	Spike	P	0 - 30
2332309	Dimethomorph	5.35	Spike	P	0 - 30
2332309	Disulfoton	5.16	Spike	P	0 - 33
2332309	Dithiopyr	8.00	Spike	P	0 - 22
2332309	EPTC	36.4	Spike	P	0 - 38
2332309	Ethion	0.729	Spike	P	0 - 79
2332309	Ethoprop	12.2	Spike	P	0 - 23
2332309	Etridiazole	19.6	Spike	P	0 - 30
2332309	Fenamiphos	4.45	Spike	P	0 - 58
2332309	Fenbuconazole	16.4	Spike	P	0 - 37
2332309	Fipronil	14.5	Spike	P	0 - 33
2332309	Fipronil Desulfinyl	14.6	Spike	P	0 - 26
2332309	Fipronil Sulfide	6.83	Spike	P	0 - 37
2332309	Fipronil Sulfone	7.56	Spike	P	0 - 50
2332309	Fluazifop-P-butyl	14.5	Spike	P	0 - 24
2332309	Fludioxonil	16.1	Spike	P	0 - 26
2332309	Flumioxazin	12.1	Spike	P	0 - 37
2332309	Flutolanil	13.1	Spike	P	0 - 26
2332309	Fluxapyroxad	13.9	Spike	P	0 - 34
2332309	Fonofos	2.79	Spike	P	0 - 27
2332309	Hexazinone	8.84	Spike	P	0 - 36
2332309	Imazalil	29.9	Spike	P	0 - 65
2332309	Iprodione	9.09	Spike	P	0 - 33
2332309	Loratadine	2.57	Spike	P	0 - 30
2332309	Malathion	9.87	Spike	P	0 - 44
2332309	Metalaxyl	8.98	Spike	P	0 - 38
2332309	Metolachlor	14.5	Spike	P	0 - 36
2332309	Metribuzin	13.9	Spike	P	0 - 63
2332309	Mevinphos	5.01	Spike	P	0 - 26
2332309	Molinate	25.1	Spike	P	0 - 40

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P415071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332309	Myclobutanil	14.7	Spike	P	0 - 21
2332309	Naled	15.4	Spike	P	0 - 26
2332309	Napropamide	6.86	Spike	P	0 - 30
2332309	Norflurazon	11.7	Spike	P	0 - 24
2332309	Oxadiazon	9.06	Spike	P	0 - 27
2332309	Oxyfluorfen	6.89	Spike	P	0 - 24
2332309	Parathion Ethyl	13.2	Spike	P	0 - 28
2332309	Parathion Methyl	9.78	Spike	P	0 - 27
2332309	Pendimethalin	10.9	Spike	P	0 - 31
2332309	Phenytoin	11.7	Spike	P	0 - 30
2332309	Phorate	13.3	Spike	P	0 - 27
2332309	Prodiamine	13.9	Spike	P	0 - 52
2332309	Prometon	13.9	Spike	P	0 - 31
2332309	Prometryn	3.32	Spike	P	0 - 28
2332309	Pronamide	11.2	Spike	P	0 - 26
2332309	Propanil	11.6	Spike	P	0 - 30
2332309	Propargite	19.1	Spike	P	0 - 30
2332309	Propiconazole	15.9	Spike	P	0 - 31
2332309	Pyraflufen Ethyl	13.8	Spike	P	0 - 30
2332309	Pyridaben	4.71	Spike	P	0 - 30
2332309	Pyriproxyfen	18.5	Spike	P	0 - 50
2332309	Simazine	12.0	Spike	P	0 - 29
2332309	Stiropfos	91.7	Spike	F	0 - 30
2332309	Sulfentrazone	14.7	Spike	P	0 - 33
2332309	Tebuconazole	9.03	Spike	P	0 - 44
2332309	Terbufos	12.9	Spike	P	0 - 29
2332309	Terbuthylazine	10.9	Spike	P	0 - 27
2332309	Thiobencarb	14.6	Spike	P	0 - 30
2332309	Triadimefon	1.48	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331315	Acesulfame K	1.58	Spike	P	0 - 30
2331315	AMPA	4.94	Spike	P	0 - 30
2331315	Endothall	0.753	Spike	P	0 - 30
2331315	Glufosinate	11.4	Spike	P	0 - 30
2331315	Glyphosate	9.62	Spike	P	0 - 30
2331315	Sucralose	3.90	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333031	2,4-D	10.6	Spike	P	0 - 30
2333031	2,4,5-T	20.0	Spike	P	0 - 30
2333031	Acetaminophen	15.6	Spike	P	0 - 30
2333031	Acetamiprid	14.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P414890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333031	Afidopyropen	13.7	Spike	P	0 - 30
2333031	Bentazon	15.0	Spike	P	0 - 30
2333031	Benzovindiflupyr	12.1	Spike	P	0 - 30
2333031	Carbamazepine	14.1	Spike	P	0 - 30
2333031	Clothianidin	15.7	Spike	P	0 - 30
2333031	Dinotefuran	17.9	Spike	P	0 - 30
2333031	Diuron	14.6	Spike	P	0 - 30
2333031	Fenuron	15.5	Spike	P	0 - 30
2333031	Fluridone	13.8	Spike	P	0 - 30
2333031	Hydrocodone	17.7	Spike	P	0 - 30
2333031	Ibuprofen	2.93	Spike	P	0 - 30
2333031	Imazapyr	11.8	Spike	P	0 - 30
2333031	Imidacloprid	20.3	Spike	P	0 - 30
2333031	Linuron	10.1	Spike	P	0 - 30
2333031	Mandestrobin	10.7	Spike	P	0 - 30
2333031	MCPP	17.5	Spike	P	0 - 30
2333031	Naproxen	28.4	Spike	P	0 - 30
2333031	Primidone	9.94	Spike	P	0 - 30
2333031	Pyraclostrobin	12.0	Spike	P	0 - 30
2333031	Silvex	24.6	Spike	P	0 - 30
2333031	Thiamethoxam	14.9	Spike	P	0 - 30
2333031	Tolfenpyrad	11.8	Spike	P	0 - 30
2333031	Triclopyr	26.9	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P415388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333178	Total Alkalinity	0.100	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P415243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332513	TDS	7.00	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P415393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333178	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332514	Organic Carbon	0.112	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: 2332675

Field Sample ID: G1TLHR0056

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.4	P	30 - 160
EPA 8321B	Diuron-d6	63.2	P	30 - 160
EPA 8321B	Endothall-d6	98.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.4	P	30 - 160
EPA 8321B	Primidone-d5	83.4	P	30 - 160
EPA 8321B	Sucralose-d6	151	P	30 - 160

Lab Sample ID: 2332677

Field Sample ID: G1TLHR0056

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	76.7	P	20 - 200
EPA 8270E	Simazine-d10	95.7	P	71 - 140
EPA 8270E	Terbufos-d10	83.4	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A112651

Included Lab Sample IDs: 2332669

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112652

Included Lab Sample IDs: 2332671

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112655

Included Lab Sample IDs: 2332669

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

Reference Method: EPA 8321B

Run ID: A112660

Included Lab Sample IDs: 2332675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	154	156	P/P	60 - 160
Sucralose	115	116	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A112661

Included Lab Sample IDs: 2332675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	91.9	90.4	P/P	60 - 160
Endothall	67.5	68.8	P/P	60 - 160
Glufosinate	99.0	102	P/P	60 - 160
Glyphosate	95.0	91.5	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A112691

Included Lab Sample IDs: 2332670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112753

Included Lab Sample IDs: 2332676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.9	99.7	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Sodium	99.2	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112753

Included Lab Sample IDs: 2332676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	103	103	P/P	90 - 110
Tin	100	100	P/P	90 - 110
Titanium	98.6	100	P/P	90 - 110
Vanadium	100	100	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112755

Included Lab Sample IDs: 2332676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	98.0	98.2	P/P	90 - 110
Arsenic	100	99.1	P/P	90 - 110
Barium	98.7	98.3	P/P	90 - 110
Beryllium	94.9	94.2	P/P	90 - 110
Boron	100	98.5	P/P	90 - 110
Cadmium	98.3	97.2	P/P	90 - 110
Chromium	97.1	95.5	P/P	90 - 110
Cobalt	98.3	97.2	P/P	90 - 110
Copper	100	98.7	P/P	90 - 110
Lead	98.6	98.7	P/P	90 - 110
Manganese	97.0	96.8	P/P	90 - 110
Molybdenum	98.7	98.1	P/P	90 - 110
Nickel	99.7	98.0	P/P	90 - 110
Selenium	97.7	96.8	P/P	90 - 110
Silver	100	99.2	P/P	90 - 110
Thallium	98.5	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112791

Included Lab Sample IDs: 2332675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	106	P/P	50 - 150
2,4,5-T	115	111	P/P	50 - 150
Acetaminophen	106	103	P/P	60 - 160
Acetamiprid	88.2	88.2	P/P	50 - 150
Afidopyropen	83.1	84.3	P/P	50 - 150
Bentazon	114	112	P/P	50 - 160
Benzovindiflupyr	78.8	79.9	P/P	50 - 150
Carbamazepine	82.8	85.1	P/P	60 - 150
Clothianidin	95.5	91.1	P/P	60 - 150
Dinotefuran	93.9	92.7	P/P	50 - 150
Diuron	85.8	82.8	P/P	60 - 160
Fenuron	87.8	88.3	P/P	60 - 150
Fluridone	98.7	94.1	P/P	60 - 160
Hydrocodone	93.5	97.6	P/P	60 - 150
Ibuprofen	110	110	P/P	50 - 160
Imazapyr	98.1	94.3	P/P	50 - 150
Imidacloprid	89.0	91.4	P/P	60 - 150
Linuron	80.7	77.4	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A112791
Included Lab Sample IDs: 2332675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mandestrobin	82.4	82.5	P/P	50 - 150
MCPD	109	113	P/P	50 - 150
Naproxen	86.7	93.8	P/P	50 - 160
Primidone	90.5	93.3	P/P	60 - 150
Pyraclostrobin	80.0	77.2	P/P	60 - 150
Silvex	115	109	P/P	50 - 150
Thiamethoxam	91.8	89.5	P/P	50 - 150
Tolfenpyrad	86.6	84.9	P/P	60 - 150
Triclopyr	105	116	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112847
Included Lab Sample IDs: 2332670

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A112854
Included Lab Sample IDs: 2332676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112862
Included Lab Sample IDs: 2332670

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

Reference Method: SM 2320 B-2011
Run ID: A112906
Included Lab Sample IDs: 2332669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A112906
Included Lab Sample IDs: 2332669

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

Reference Method: EPA 8270E
Run ID: A112909
Included Lab Sample IDs: 2332677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	107		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112909
Included Lab Sample IDs: 2332677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorfenapyr	108		P	80 - 120
Coumaphos	116		P	80 - 120
Malathion	101		P	80 - 120
Naled	104		P	80 - 120
Pyridaben	106		P	80 - 120
Stirophos	108		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A112925
Included Lab Sample IDs: 2332669

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A112954
Included Lab Sample IDs: 2332670

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

Reference Method: EPA 8270E
Run ID: A112959
Included Lab Sample IDs: 2332677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	96.0		P	80 - 120
Ametryn	91.9		P	80 - 120
Atrazine	99.4		P	80 - 120
Atrazine Desethyl	92.1		P	80 - 120
Azinphos Methyl	97.8		P	80 - 120
Azoxystrobin	95.5		P	80 - 120
Bromacil	98.6		P	80 - 120
Butylate	111		P	80 - 120
Caffeine	98.6		P	80 - 120
Carfentrazone Ethyl	102		P	80 - 120
Chlorpyrifos Ethyl	109		P	80 - 120
Chlorpyrifos Methyl	106		P	80 - 120
Cyanazine	89.9		P	80 - 120
Cyprodinil	89.2		P	80 - 120
Demeton	109		P	80 - 120
Diazinon	93.9		P	80 - 120
Difenoconazole	94.9		P	80 - 120
Dimethenamid	105		P	80 - 120
Dimethomorph	99.0		P	80 - 120
Disulfoton	106		P	80 - 120
Dithiopyr	99.8		P	80 - 120
EPTC	103		P	80 - 120
Ethion	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112959
Included Lab Sample IDs: 2332677

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	97.5		P	80 - 120
Etridiazole	93.7		P	80 - 120
Fenamiphos	115		P	80 - 120
Fenbuconazole	97.3		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Desulfinyl	100		P	80 - 120
Fipronil Sulfide	119		P	80 - 120
Fipronil Sulfone	119		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Fludioxonil	98.2		P	80 - 120
Flumioxazin	88.5		P	80 - 120
Flutolanil	96.3		P	80 - 120
Fluxapyroxad	99.4		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	98.5		P	80 - 120
Iprodione	96.7		P	80 - 120
Loratadine	98.7		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	98.6		P	80 - 120
Mevinphos	93.5		P	80 - 120
Molinate	97.9		P	80 - 120
Myclobutanil	105		P	80 - 120
Napropamide	100		P	80 - 120
Norflurazon	99.5		P	80 - 120
Oxadiazon	105		P	80 - 120
Oxyfluorfen	101		P	80 - 120
Parathion Ethyl	96.9		P	80 - 120
Parathion Methyl	96.1		P	80 - 120
Pendimethalin	98.3		P	80 - 120
Phenytol	106		P	80 - 120
Phorate	103		P	80 - 120
Prodiamine	106		P	80 - 120
Prometon	97.9		P	80 - 120
Prometryn	92.0		P	80 - 120
Pronamide	99.0		P	80 - 120
Propanil	101		P	80 - 120
Propargite	102		P	80 - 120
Propiconazole	98.6		P	80 - 120
Pyraflufen Ethyl	105		P	80 - 120
Pyriproxyfen	100		P	80 - 120
Simazine	99.9		P	80 - 120
Sulfentrazone	102		P	80 - 120
Tebuconazole	98.0		P	80 - 120
Terbufos	102		P	80 - 120
Terbuthylazine	102		P	80 - 120
Thiobencarb	98.9		P	80 - 120
Triadimefon	101		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112961

Included Lab Sample IDs: 2332670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	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)	102					1.45	
EPA 180.1 Rev. 2.0	Turbidity	96.7					1.74	
EPA 200.7 Rev. 4.4	Calcium	103	98.8	101				2.31
	Iron	103	102	105	103			2.61
	Magnesium	104	101	102	104			1.02
	Potassium	106	103	104	111			0.864
	Sodium	102	101	102				1.16
	Strontium	103	104	104	105			0.0407
	Tin	100	97.9	99.3	103			1.39
	Titanium	100	104	113	101			7.49
	Vanadium	94.3	96.1	96.5	97.5			0.405
	Zinc	99.2	98.1	98.9	102			0.759
EPA 200.8 Rev. 5.4	Aluminum	102	102	99.5	109			2.15
	Antimony	99.7	97.7	100	101			2.59
	Arsenic	101	98.9	101	100			2.27
	Barium	103	104	101	104			2.05
	Beryllium	96.5	96.6	98.6	95.3			1.81
	Boron	106	107	108	105			1.45
	Cadmium	97.8	98.1	101	101			3.11
	Chromium	95.9	99.2	100	97.4			1.31
	Cobalt	99.1	98.1	99.3	99.4			1.23
	Copper	99.1	97.7	99.0	100			1.23
	Lead	101	100	102	102			1.43
	Manganese	96.6	99.7					1.35
	Molybdenum	99.2	99.7	101	101			0.894
	Nickel	100	100	102	102			1.17
	Selenium	98.6	96.7	97.7	98.4			1.05
	Silver	99.4	98.5	99.2	100			0.742
	Thallium	102	102	105	104			2.48
EPA 300.0 Rev. 2.1	Chloride	99.6	100	99.7			2.74	
	Sulfate	98.9	99.2	99.2			1.25	
EPA 350.1 Rev. 2.0	Ammonia-N	102	109	109				0.323
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6	95.1	98.0				2.64
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	96.5	96.5				0.0
EPA 365.1 Rev. 2.0	Total-P	104	103	102				0.644
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	96.6	96.9				0.279
EPA 8270E	Acetochlor	111	88.5	106				15.3
	Alachlor	100	83.7	96.4				14.1
	Ametryn	118	108	108				0.402
	Atrazine	98.4						11.6
	Atrazine Desethyl	69.9	50.1	61.9				16.2
	Azinphos Methyl	170	143	170				17.1
	Azoxystrobin	96.9	70.1	109				22.0
	Bromacil	95.7	79.3	96.5				19.6
	Butylate	41.7	42.4	54.1				24.2
	Caffeine	74.0	88.8	83.6				5.89
	Carbophenothion	95.9	88.4	99.7				12.0
	Carfentrazone Ethyl	129	108	125				14.6
	Chlorfenapyr	81.8	81.0	85.7				5.60
	Chlorpyrifos Ethyl	82.6	75.6	82.4				8.59
	Chlorpyrifos Methyl	82.3	80.2	86.5				7.54
	Coumaphos	114	110	113				2.88
	Cyanazine	159	94.0	113				18.5
	Cyprodinil	111	93.4	103				8.78

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Demeton	64.4	77.4	84.7			9.01
	Diazinon	107	88.5	99.9			12.1
	Difenoconazole	197	174	196			10.4
	Dimethenamid	93.4	82.1	91.6			11.0
	Dimethomorph	77.1	78.6	82.9			5.35
	Disulfoton	75.9	80.4	84.6			5.16
	Dithiopyr	104	87.6	94.9			8.00
	EPTC	44.1	36.2	52.3			36.4
	Ethion	73.7	75.8	76.3			0.729
	Ethoprop	71.1	71.9	81.3			12.2
	Etridiazole	67.5	52.2	63.5			19.6
	Fenamiphos	87.9	95.0	99.3			4.45
	Fenbuconazole	146	126	148			16.4
	Fipronil	108	91.9	106			14.5
	Fipronil Desulfinyl	105	85.5	99.0			14.6
	Fipronil Sulfide	78.5	78.1	83.6			6.83
	Fipronil Sulfone	86.1	85.6	92.3			7.56
	Fluazifop-P-butyl	103	84.7	98.0			14.5
	Fludioxonil	112	88.9	111			16.1
	Flumioxazin	222	202	228			12.1
	Flutolanil	97.3	82.6	95.3			13.1
	Fluxapyroxad	84.3	62.7	84.0			13.9
	Fonofos	72.2	73.6	75.7			2.79
	Hexazinone	98.0	89.4	98.2			8.84
	Imazalil	94.2	79.1	107			29.9
	Iprodione	107	103	113			9.09
	Loratadine	69.4	73.1	75.0			2.57
	Malathion	101	97.3	107			9.87
	Metalaxyl	96.0	79.8	88.0			8.98
	Metolachlor	106					14.5
	Metribuzin	91.5	105	120			13.9
	Mevinphos	58.6	65.6	69.0			5.01
	Molinate	55.9	51.1	65.8			25.1
	Myclobutanil	110	95.1	110			14.7
	Naled	105	92.5	108			15.4
	Napropamide	86.0	76.9	82.4			6.86
	Norflurazon	117	102	115			11.7
	Oxadiazon	90.7	78.0	85.4			9.06
	Oxyfluorfen	129	114	122			6.89
	Parathion Ethyl	89.9	81.7	93.3			13.2
	Parathion Methyl	106	103	113			9.78
	Pendimethalin	81.7	90.4	101			10.9
	Phenytoin	112	95.3	107			11.7
	Phorate	50.8	72.7	83.1			13.3
	Prodiamine	98.4	91.9	106			13.9
	Prometon	107	71.8	82.6			13.9
	Prometryn	102	93.3	96.5			3.32
	Pronamide	112	99.3	111			11.2
	Propanil	88.5	76.2	85.6			11.6
	Propargite	145	117	142			19.1
	Propiconazole	110	86.7	107			15.9
	Pyraflufen Ethyl	117	98.5	113			13.8
	Pyridaben	99.3	93.4	97.9			4.71
	Pyriproxyfen	142	120	145			18.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Simazine	98.6	93.6	106		12.0
	Stirophos	16.8	81.4	30.2		91.7
	Sulfentrazone	139	94.4	109		14.7
	Tebuconazole	58.1	56.9	63.2		9.03
	Terbufos	80.0	80.9	92.1		12.9
	Terbutylazine	89.8	82.4	91.9		10.9
	Thiobencarb	96.6	79.7	92.3		14.6
	Triadimefon	87.4	70.7	69.6		1.48
EPA 8321B	2,4-D	89.2	113	101		10.6
	2,4,5-T	79.4	103	84.0		20.0
	Acesulfame K	140	125	127		1.58
	Acetaminophen	92.8	125	105		15.6
	Acetamiprid	74.0	98.4	84.8		14.9
	Afidopyropen	66.4	89.5	78.1		13.7
	AMPA	88.9	67.0	61.8		4.94
	Bentazon	114	123	102		15.0
	Benzovindiflupyr	59.5	66.6	59.0		12.1
	Carbamazepine	79.6	95.9	82.7		14.1
	Clothianidin	93.6	110	93.9		15.7
	Dinotefuran	91.0	123	103		17.9
	Diuron	79.5	93.9	79.9		14.6
	Endothall	75.1	72.4	72.9		0.753
	Fenuron	88.9	97.3	83.3		15.5
	Fluridone	88.0	102	89.1		13.8
	Glufosinate	101	92.8	82.8		11.4
	Glyphosate	90.7	79.9	97.2		9.62
	Hydrocodone	86.9	108	90.7		17.7
	Ibuprofen	97.7	92.5	95.2		2.93
	Imazapyr	108	135	114		11.8
	Imidacloprid	85.0	113	88.2		20.3
	Linuron	67.0	77.4	70.0		10.1
	Mandestrobin	63.8	70.0	62.8		10.7
	MCPP	107	139	116		17.5
	Naproxen	98.2	100	75.2		28.4
	Primidone	91.4	111	101		9.94
	Pyraclostrobin	52.0	63.7	56.5		12.0
	Silvex	67.5	97.3	76.0		24.6
	Sucralose	113	108	112		3.90
	Thiamethoxam	88.7	105	90.9		14.9
	Tolfenpyrad	37.1	42.1	37.4		11.8
	Triclopyr	76.8	103	78.3		26.9
SM 2320 B-2011	Total Alkalinity	103			0.100	
SM 2540 C-2011	TDS				7.00	
SM 4500-F- C-2011	Fluoride	102	103	103		0.0
SM 5310 B-2011	Organic Carbon	94.1	94.2	94.4		0.112

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2332669
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2332669
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2332676

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	2332676
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2332669
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2332669
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2332670
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2332670
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2332670
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2332670
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2332671
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2332677
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2332675
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2332669
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2332676
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2332669
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2332669
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2332669
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2332670

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	06/07/2022			06/07/2022 15:09	Samantha L Bates	2332669
EPA 180.1 Rev. 2.0	06/07/2022			06/07/2022 15:34	Khloe J Berg	2332669
EPA 200.7 Rev. 4.4	06/07/2022	06/10/2022 10:12	Megan Whitefoot	06/11/2022 15:06	Betina Topolski	2332676
EPA 200.8 Rev. 5.4	06/07/2022	06/10/2022 10:12	Megan Whitefoot	06/10/2022 19:43	Alexander Thompson	2332676
	06/07/2022	06/15/2022 09:35	Megan Whitefoot	06/15/2022 15:52	Alexander Thompson	2332676
EPA 300.0 Rev. 2.1	06/07/2022			06/15/2022 18:36	Anna M. Plaviak	2332669
EPA 350.1 Rev. 2.0	06/07/2022			06/21/2022 11:01	Ping Hua	2332670
EPA 351.2 Rev. 2.0	06/07/2022	06/14/2022 16:18	Samantha L Bates	06/15/2022 16:45	Alexandra J Mattheus	2332670
EPA 353.2 Rev. 2.0	06/07/2022			06/20/2022 12:25	Beverly Y. Sanders	2332670
EPA 365.1 Rev. 2.0	06/07/2022	06/10/2022 14:40	Simonne.V. Calhoun	06/13/2022 16:21	James L Waggeberby	2332670
EPA 365.1 Rev. 2.0 dissolved	06/07/2022			06/07/2022 15:42	Nathaniel J Jones	2332671
EPA 8270E	06/07/2022	06/13/2022 08:00	Rasheda Ghaffari	06/16/2022 19:47	Michael Poppell	2332677
	06/07/2022	06/13/2022 08:00	Rasheda Ghaffari	06/18/2022 18:40	Michael Poppell	2332677
EPA 8321B	06/07/2022	06/07/2022 13:30	Umesh Chiluwal	06/07/2022 17:10	Umesh Chiluwal	2332675
	06/07/2022	06/07/2022 13:30	Umesh Chiluwal	06/08/2022 01:10	Umesh Chiluwal	2332675
	06/07/2022	06/09/2022 08:30	June Rhew	06/10/2022 20:04	Juyoung Kim	2332675
SM 2320 B-2011	06/07/2022			06/16/2022 21:19	Dale L. Simmons	2332669
SM 2340 B-2011	06/07/2022			06/11/2022 15:06	Betina Topolski	2332676
SM 2540 C-2011	06/07/2022			06/10/2022 14:26	Yijie Li	2332669
SM 2540 D-2011	06/07/2022			06/10/2022 14:26	Yijie Li	2332669
SM 4500-F- C-2011	06/07/2022			06/16/2022 21:19	Dale L. Simmons	2332669
SM 5310 B-2011	06/07/2022			06/09/2022 02:59	Khloe J Berg	2332670