

Chemical Analysis Report

TLH-ROC-2022-06-08-01

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

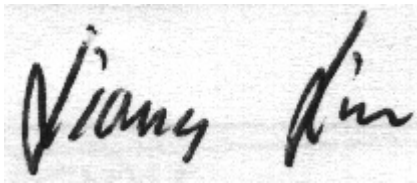
Event Description: **SCI Kits**
Request ID: **RQ-2022-05-30-18**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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2600 Blair Stone Rd
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 29-JUN-2022 13:49

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Ocklawaha Creek @ SR 267

Collection Date/Time: 06/08/2022 09:10

Field ID: G1TLHR0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333211	DEP SOP: NU-094-1	Color (true)**	140		PCU	P415003	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P414996	
	EPA 300.0 Rev. 2.1	Chloride	2.2		mg Cl/L	P415411	
		Sulfate	0.89		mg SO4/L	P415416	
	SM 2320 B-2011	Total Alkalinity	1.0	U	mg CaCO3/L	P415388	
	SM 2540 C-2011	TDS	26		mg/L	P415490	
	SM 2540 D-2011	TSS	4	I	mg/L	P415429	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P415393	
2333212	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P415586	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P415361	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P415722	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P415066	
	SM 5310 B-2011	Organic Carbon	9.5		mg C/L	P415295	
2333213	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P415017	
2333217	EPA 8321B	2,4-D	0.0020	U	ug/L	P414950	
		Acesulfame K	0.10	U	ug/L	P414936	
		2,4,5-T	0.0040	U	ug/L	P414950	
		AMPA	0.10	U	ug/L	P414936	
		Acetaminophen	0.0080	U	ug/L	P414950	
		Acetamiprid	0.0020	U	ug/L	P414950	
		Endothall	0.25	U	ug/L	P414936	
		Glufosinate	0.10	U	ug/L	P414936	
		Glyphosate	0.10	U	ug/L	P414936	
		Afidopyropen	0.0020	U	ug/L	P414950	
		Bentazon	8.0E-04	U	ug/L	P414950	
		Sucralose	0.010	U	ug/L	P414936	
		Benzovindiflupyr	0.0020	U	ug/L	P414950	
		Carbamazepine	8.0E-04	U	ug/L	P414950	
		Clothianidin	0.0020	U	ug/L	P414950	
		Dinotefuran	0.0020	U	ug/L	P414950	
		Diuron	0.0020	U	ug/L	P414950	
		Fenuron	0.032	U	ug/L	P414950	
		Fluridone	8.0E-04	U	ug/L	P414950	
		Imazapyr	0.022		ug/L	P414950	
		Hydrocodone	0.0020	U	ug/L	P414950	
		Ibuprofen	0.080	U	ug/L	P414950	
		Imidacloprid	0.0020	U	ug/L	P414950	
		Linuron	0.0040	U	ug/L	P414950	
		Mandestrobin	0.0020	U	ug/L	P414950	
		MCP	0.0040	U	ug/L	P414950	
		Naproxen	0.0080	U	ug/L	P414950	
		Primidone	0.0040	U	ug/L	P414950	
		Pyraclostrobin	0.0020	U	ug/L	P414950	

Field ID: G1TLHR0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333217	EPA 8321B	Silvex	0.0040	U	ug/L	P414950	
		Thiamethoxam	0.0020	U	ug/L	P414950	
		Tolfenpyrad	0.0020	U	ug/L	P414950	
		Triclopyr	0.0040	U	ug/L	P414950	
2333218	EPA 200.7 Rev. 4.4	Calcium	1.04		mg/L	P415009	
		Iron	140		ug/L	P415009	
		Magnesium	0.37		mg/L	P415009	
		Potassium	0.30	U	mg/L	P415009	
		Sodium	1.2	I	mg/L	P415009	
		Strontium	5.5	I	ug/L	P415009	
		Tin	3.0	U	ug/L	P415009	
		Titanium	2.3	I	ug/L	P415009	
		Vanadium	2.0	U	ug/L	P415009	
		Zinc	5.0	U	ug/L	P415009	
	EPA 200.8 Rev. 5.4	Aluminum	182		ug/L	P415208	
		Antimony	0.050	U	ug/L	P415009	
		Arsenic	0.12	I	ug/L	P415009	
		Barium	4.53		ug/L	P415009	
		Beryllium	0.010	U	ug/L	P415009	
		Boron**	8.1		ug/L	P415009	
		Cadmium	0.020	U	ug/L	P415009	
		Chromium	0.40	U	ug/L	P415009	
		Cobalt	0.061	I	ug/L	P415009	
		Copper	0.40	U	ug/L	P415009	
		Lead	0.20	U	ug/L	P415009	
		Manganese	5.34		ug/L	P415009	
2333219	SM 2340 B-2011	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	
	EPA 8270E	Thallium	0.10	U	ug/L	P415009	
		Hardness	4.1		mg/L	P415009	
		Acetochlor	0.24	U	ng/L	P415088	
		Alachlor	0.24	U	ng/L	P415088	
		Ametryn	0.59	U	ng/L	P415088	
		Atrazine	0.24	U	ng/L	P415088	
		Atrazine Desethyl	1.5	U	ng/L	P415088	
		Azinphos Methyl	2.0	U	ng/L	P415088	
		Azoxystrobin**	0.49	U	ng/L	P415088	
		Bromacil	0.49	U	ng/L	P415088	
		Butylate	0.39	U	ng/L	P415088	
		Caffeine**	7.3	U	ng/L	P415088	
		Carbophenothion	0.20	U	ng/L	P415088	
		Carfentrazone Ethyl**	0.098	U	ng/L	P415088	
		Chlorfenapyr**	0.17	U	ng/L	P415088	

Field ID: G1TLHR0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333219	EPA 8270E	Chlorpyrifos Ethyl	0.24	U	ng/L	P415088	
		Chlorpyrifos Methyl	0.049	U	ng/L	P415088	
		Coumaphos**	0.49	U	ng/L	P415088	
		Cyanazine	3.2	U	ng/L	P415088	
		Cyprodinil**	0.098	U	ng/L	P415088	
		Demeton	1.5	U	ng/L	P415088	
		Diazinon	0.12	U	ng/L	P415088	
		Difenoconazole**	0.59	U	ng/L	P415088	RPD
		Dimethenamid**	0.098	U	ng/L	P415088	
		Dimethomorph**	0.17	U	ng/L	P415088	RPD
		Disulfoton	0.49	U	ng/L	P415088	
		Dithiopyr**	0.17	U	ng/L	P415088	
		EPTC	1.2	U	ng/L	P415088	
		Ethion	0.15	U	ng/L	P415088	
		Ethoprop	0.098	U	ng/L	P415088	
		Etridiazole**	0.15	UJ	ng/L	P415088	LCS
		Fenamiphos	0.49	U	ng/L	P415088	
		Fenbuconazole**	0.12	U	ng/L	P415088	
		Fipronil	0.24	U	ng/L	P415088	
		Fipronil Desulfinyl**	0.12	U	ng/L	P415088	
		Fipronil Sulfide	0.15	U	ng/L	P415088	
		Fipronil Sulfone	0.15	U	ng/L	P415088	
		Fluazifop-P-butyl**	0.098	U	ng/L	P415088	
		Fludioxonil**	0.12	U	ng/L	P415088	
		Flumioxazin**	1.7	U	ng/L	P415088	RPD
		Flutolanil**	0.098	U	ng/L	P415088	
		Fluxapyroxad**	0.098	U	ng/L	P415088	RPD
		Fonofos	0.20	U	ng/L	P415088	
		Hexazinone	3.6		ng/L	P415088	
		Imazalil**	0.73	U	ng/L	P415088	
		Iprodione**	0.59	U	ng/L	P415088	
		Loratadine**	0.098	U	ng/L	P415088	MS, RPD
		Malathion	0.34	U	ng/L	P415088	
		Metalaxyl	0.73	U	ng/L	P415088	
		Metolachlor	0.34	U	ng/L	P415088	
		Metribuzin	2.4	U	ng/L	P415088	
		Mevinphos	1.0	U	ng/L	P415088	
		Molinate	0.29	U	ng/L	P415088	
		Myclobutanil**	0.24	U	ng/L	P415088	
		Naled**	1.5	U	ng/L	P415088	
		Napropamide**	0.39	U	ng/L	P415088	MS, RPD
		Norflurazon	0.49	U	ng/L	P415088	
		Oxadiazon	1.9		ng/L	P415088	RPD
		Oxyfluorfen**	0.15	U	ng/L	P415088	
		Parathion Ethyl	0.24	U	ng/L	P415088	

Field ID: G1TLHR0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333219	EPA 8270E	Parathion Methyl	0.54	U	ng/L	P415088	MS, RPD
		Pendimethalin	0.98	U	ng/L	P415088	
		Phenytol**	3.4	U	ng/L	P415088	
		Phorate	0.51	U	ng/L	P415088	
		Prodiatamine**	0.17	U	ng/L	P415088	
		Prometon	0.88	U	ng/L	P415088	
		Prometryn	0.20	U	ng/L	P415088	
		Pronamide**	0.15	U	ng/L	P415088	
		Propanil**	0.12	U	ng/L	P415088	
		Propargite**	1.5	U	ng/L	P415088	RPD
		Propiconazole**	0.49	U	ng/L	P415088	
		Pyraflufen Ethyl**	0.24	U	ng/L	P415088	
		Pyridaben**	0.44	U	ng/L	P415088	
		Pyriproxyfen**	0.12	U	ng/L	P415088	RPD
		Simazine	0.49	U	ng/L	P415088	
		Stirophos**	0.12	U	ng/L	P415088	MS
		Sulfentrazone**	0.49	U	ng/L	P415088	
		Tebuconazole**	0.49	U	ng/L	P415088	RPD
		Terbufos	0.098	U	ng/L	P415088	
		Terbutylazine	0.41	U	ng/L	P415088	
		Thiobencarb**	0.59	U	ng/L	P415088	
		Triadimefon**	0.24	U	ng/L	P415088	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked 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 multiple parameters 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: P415003

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414996

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: P415411

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415416

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415361

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415722

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415066

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P415017

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

Reference Method: EPA 8270E
Batch ID: P415088

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: P415088

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: P415088

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: P415088

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: P414936

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P414936

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: P414950

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 CaCO ₃ /L

Reference Method: SM 2540 C-2011

Batch ID: P415490

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P415429

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: P415295

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: P415003

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414996

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: P415411

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415416

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415361

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415722

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415066

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: P415017

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

Reference Method: EPA 8270E
Batch ID: P415088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.9		P	70 - 121
Alachlor	86.7		P	68 - 119
Ametryn	95.9		P	64 - 139
Atrazine	84.3		P	76 - 120
Atrazine Desethyl	46.5		P	44 - 126
Azinphos Methyl	138		P	43 - 192
Azoxystrobin	106		P	36 - 224
Bromacil	56.0		P	52 - 121
Butylate	52.2		P	28 - 91.0
Caffeine	91.9		P	50 - 134

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbophenothion	118		P	56 - 129
Carfentrazone Ethyl	114		P	60 - 141
Chlorfenapyr	85.9		P	56 - 115
Chlorpyrifos Ethyl	93.8		P	60 - 118
Chlorpyrifos Methyl	106		P	68 - 119
Coumaphos	155		P	18 - 250
Cyanazine	86.0		P	61 - 250
Cyprodinil	84.4		P	55 - 145
Demeton	80.4		P	30 - 159
Diazinon	93.2		P	70 - 123
Difenoconazole	141		P	49 - 204
Dimethenamid	77.7		P	64 - 115
Dimethomorph	94.3		P	12 - 219
Disulfoton	90.3		P	44 - 125
Dithiopyr	88.3		P	64 - 115
EPTC	55.0		P	28 - 86.0
Ethion	77.8		P	33 - 125
Ethoprop	81.4		P	64 - 116
Etridiazole	115		F	34 - 91.0
Fenamiphos	104		P	12 - 127
Fenbuconazole	110		P	59 - 151
Fipronil	91.5		P	67 - 129
Fipronil Desulfinyl	89.5		P	65 - 127
Fipronil Sulfide	90.8		P	61 - 116
Fipronil Sulfone	99.2		P	55 - 117
Fluazifop-P-butyl	95.5		P	62 - 127
Fludioxonil	93.4		P	62 - 128
Flumioxazin	132		P	33 - 250
Flutolanil	88.9		P	56 - 127
Fluxapyroxad	115		P	45 - 128
Fonofos	86.4		P	62 - 111
Hexazinone	91.1		P	46 - 139
Imazalil	80.9		P	38 - 142
Iprodione	115		P	47 - 135
Loratadine	84.1		P	10 - 244
Malathion	110		P	61 - 139
Metalaxyl	81.0		P	10 - 119
Metolachlor	87.9		P	65 - 118
Metribuzin	80.9		P	51 - 250
Mevinphos	71.7		P	53 - 121
Molinate	73.0		P	42 - 96.0
Myclobutanil	99.5		P	55 - 128
Naled	65.5		P	10 - 98.0
Napropamide	77.3		P	49 - 121
Norflurazon	96.1		P	61 - 126
Oxadiazon	77.5		P	59 - 116
Oxyfluorfen	111		P	64 - 137
Parathion Ethyl	87.8		P	70 - 112
Parathion Methyl	105		P	76 - 133
Pendimethalin	91.7		P	52 - 117
Phenytion	18.1		P	10 - 199
Phorate	67.4		P	48 - 121

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P415088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prodiamine	97.9		P	26 - 142
Prometon	95.4		P	43 - 123
Prometryn	76.8		P	66 - 127
Pronamide	94.9		P	75 - 121
Propanil	79.4		P	45 - 150
Propargite	110		P	42 - 208
Propiconazole	96.1		P	60 - 125
Pyraflufen Ethyl	107		P	70 - 138
Pyridaben	128		P	35 - 245
Pyriproxyfen	106		P	30 - 149
Simazine	75.1		P	72 - 125
Stiophos	87.4		P	29 - 164
Sulfentrazone	31.3		P	21 - 139
Tebuconazole	100		P	10 - 115
Terbufos	102		P	60 - 123
Terbutylazine	84.1		P	72 - 115
Thiobencarb	81.6		P	31 - 139
Triadimefon	80.7		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P414936

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	93.0		P	40 - 150
AMPA	99.7		P	40 - 150
Endothall	96.9		P	40 - 150
Glufosinate	94.7		P	40 - 150
Glyphosate	99.2		P	40 - 150
Sucralose	94.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	88.3		P	40 - 150
2,4,5-T	82.6		P	40 - 150
Acetaminophen	81.6		P	30 - 150
Acetamiprid	69.6		P	40 - 150
Afidopyropen	59.1		P	30 - 150
Bentazon	93.8		P	30 - 150
Benzovindiflupyr	52.5		P	40 - 150
Carbamazepine	66.1		P	40 - 150
Clothianidin	76.6		P	40 - 150
Dinotefuran	78.4		P	40 - 150
Diuron	66.8		P	40 - 150
Fenuron	72.1		P	40 - 150
Fluridone	75.0		P	40 - 150
Hydrocodone	75.3		P	40 - 150
Ibuprofen	84.2		P	40 - 150
Imazapyr	84.7		P	40 - 150
Imidacloprid	70.8		P	40 - 150
Linuron	61.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P414950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mandestrobin	53.5		P	40 - 150
MCPPP	91.7		P	40 - 150
Naproxen	78.9		P	40 - 150
Primidone	81.6		P	40 - 150
Pyraclostrobin	50.9		P	40 - 150
Silvex	75.8		P	40 - 150
Thiamethoxam	73.9		P	40 - 150
Tolfenpyrad	40.5		P	30 - 150
Triclopyr	84.0		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: P415295

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.2		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: P415411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333069	Chloride	101		P	90 - 110
2333176	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333069	Sulfate	101		P	90 - 110
2333176	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333179	Ammonia-N	101	99.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333149	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333192	Total-P	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P415017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333213	O-Phosphate-P	103	102	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P415088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333511	Acetochlor	104	85.4	P/P	65 - 124
2333511	Alachlor	96.1	76.9	P/P	61 - 121
2333511	Ametryn	116	99.4	P/P	52 - 216
2333511	Atrazine Desethyl	22.9	24.7	P/P	15 - 160
2333511	Azinphos Methyl	148	78.7	P/P	40 - 292
2333511	Azoxystrobin	80.6	99.9	P/P	12 - 242
2333511	Bromacil	59.6	57.5	P/P	54 - 167
2333511	Butylate	50.6	59.2	P/P	14 - 94.0
2333511	Caffeine	96.2	91.1	P/P	10 - 226
2333511	Carbophenothion	113	103	P/P	49 - 122
2333511	Carfentrazone Ethyl	125	100	P/P	53 - 138
2333511	Chlorfenapyr	83.5	85.7	P/P	50 - 150
2333511	Chlorpyrifos Ethyl	91.8	81.3	P/P	52 - 122
2333511	Chlorpyrifos Methyl	99.1	85.5	P/P	66 - 117
2333511	Coumaphos	145	126	P/P	50 - 220
2333511	Cyanazine	80.6	58.9	P/P	43 - 245
2333511	Cyprodinil	90.6	76.5	P/P	50 - 150
2333511	Demeton	127	123	P/P	43 - 188
2333511	Diazinon	111	91.8	P/P	69 - 131
2333511	Difenoconazole	170	99.9	P/P	34 - 231
2333511	Dimethenamid	87.1	66.7	P/P	55 - 118
2333511	Dimethomorph	88.4	142	P/P	50 - 150
2333511	Disulfoton	89.0	79.5	P/P	38 - 141
2333511	EPTC	44.9	55.6	P/P	18 - 85.0
2333511	Ethion	71.6	46.5	P/P	10 - 131
2333511	Ethoprop	91.8	84.2	P/P	65 - 129
2333511	Etridiazole	124	120	P/P	50 - 150
2333511	Fenamiphos	101	104	P/P	31 - 137
2333511	Fenbuconazole	124	92.3	P/P	57 - 160
2333511	Fipronil	103	86.5	P/P	62 - 132
2333511	Fipronil Desulfinyl	95.7	81.8	P/P	57 - 131
2333511	Fipronil Sulfide	87.8	81.9	P/P	15 - 138
2333511	Fipronil Sulfone	91.7	74.4	P/P	21 - 134
2333511	Fluazifop-P-butyl	103	85.6	P/P	54 - 133
2333511	Fludioxonil	97.1	76.2	P/P	58 - 127
2333511	Flumioxazin	158	82.7	P/P	33 - 300
2333511	Flutolanil	91.9	72.5	P/P	42 - 130
2333511	Fluxapyroxad	131	78.9	P/P	23 - 141
2333511	Fonofos	95.4	82.3	P/P	58 - 119
2333511	Hexazinone	88.2	70.9	P/P	68 - 172
2333511	Imazalil	73.8	75.7	P/P	48 - 283
2333511	Iprodione	140	112	P/P	38 - 140
2333511	Loratadine	88.5	163	P/F	50 - 150
2333511	Malathion	99.9	93.2	P/P	40 - 137
2333511	Metalaxyl	80.1	67.0	P/P	21 - 129
2333511	Metolachlor	90.7	73.1	P/P	55 - 122
2333511	Metribuzin	75.1	88.5	P/P	38 - 187
2333511	Mevinphos	78.2	72.7	P/P	54 - 134
2333511	Molinate	73.0	69.6	P/P	41 - 97.0
2333511	Myclobutanil	98.9	75.8	P/P	56 - 125
2333511	Naled	77.2	75.3	P/P	10 - 108
2333511	Napropamide	75.4	27.3	P/F	50 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P415088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333511	Oxyfluorfen	120	98.6	P/P	61 - 153
2333511	Parathion Ethyl	85.2	74.8	P/P	59 - 130
2333511	Parathion Methyl	114	99.4	P/P	65 - 155
2333511	Pendimethalin	105	93.8	P/P	49 - 138
2333511	Phenytoin	45.6	33.3	F/F	50 - 200
2333511	Phorate	69.1	68.6	P/P	54 - 161
2333511	Prodiamine	101	90.0	P/P	33 - 161
2333511	Prometon	106	95.4	P/P	48 - 140
2333511	Prometryn	84.8	75.2	P/P	55 - 134
2333511	Pronamide	101	79.7	P/P	66 - 137
2333511	Propanil	81.7	70.3	P/P	50 - 150
2333511	Propargite	115	66.8	P/P	50 - 200
2333511	Pyraflufen Ethyl	122	103	P/P	50 - 150
2333511	Pyridaben	116	95.7	P/P	50 - 200
2333511	Pyriproxyfen	105	25.0	P/P	10 - 165
2333511	Simazine	190	178	F/F	57 - 145
2333511	Stirophos	67.7	57.4	P/P	50 - 150
2333511	Tebuconazole	102	50.5	P/P	10 - 127
2333511	Terbufos	105	99.0	P/P	59 - 138
2333511	Terbuthylazine	90.5	76.8	P/P	68 - 119
2333511	Thiobencarb	84.6	70.9	P/P	50 - 150
2333511	Triadimefon	75.2	66.9	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P414936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333217	Acesulfame K	88.2	86.5	P/P	40 - 150
2333217	AMPA	113	109	P/P	40 - 150
2333217	Endothall	98.4	95.6	P/P	40 - 150
2333217	Glufosinate	100	108	P/P	40 - 150
2333217	Glyphosate	105	101	P/P	40 - 150
2333217	Sucralose	97.5	96.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P414950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333123	2,4-D	121	121	P/P	40 - 150
2333123	2,4,5-T	109	112	P/P	40 - 150
2333123	Acetaminophen	121	123	P/P	30 - 150
2333123	Acetamiprid	75.6	74.9	P/P	40 - 150
2333123	Afidopyropen	63.1	61.5	P/P	30 - 150
2333123	Benzovindiflupyr	57.5	61.6	P/P	40 - 150
2333123	Carbamazepine	91.4	93.5	P/P	40 - 150
2333123	Clothianidin	104	100	P/P	40 - 150
2333123	Dinotefuran	126	124	P/P	40 - 150
2333123	Diuron	80.8	85.3	P/P	40 - 150
2333123	Fenuron	76.9	78.4	P/P	40 - 150
2333123	Fluridone	87.4	85.6	P/P	40 - 150
2333123	Hydrocodone	93.2	98.2	P/P	40 - 150
2333123	Ibuprofen	96.3	92.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P414950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333123	Imidacloprid	126	124	P/P	40 - 150
2333123	Linuron	74.7	71.0	P/P	40 - 150
2333123	Mandestrobin	61.1	62.6	P/P	40 - 150
2333123	MCPP	131	133	P/P	40 - 150
2333123	Naproxen	113	94.3	P/P	40 - 150
2333123	Primidone	109	106	P/P	40 - 150
2333123	Pyraclostrobin	57.0	57.9	P/P	40 - 150
2333123	Silvex	109	104	P/P	40 - 150
2333123	Thiamethoxam	126	126	P/P	40 - 150
2333123	Tolfenpyrad	45.8	44.6	P/P	30 - 150
2333123	Triclopyr	123	126	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: P415295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332821	Organic Carbon	94.5	95.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P415003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333231	Color (true)	10.5	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333412	Turbidity	6.30	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: P415411

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333069	Chloride	0.739	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415586

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333179	Ammonia-N	1.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415361

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332995	Kjeldahl Nitrogen	5.95	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415722

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333149	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415066

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333192	Total-P	0.321	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P415017

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333213	O-Phosphate-P	0.978	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P415088

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333511	Acetochlor	19.6	Spike	P	0 - 27
2333511	Alachlor	22.2	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P415088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333511	Ametryn	15.4	Spike	P	0 - 34
2333511	Atrazine	24.9	Spike	P	0 - 41
2333511	Atrazine Desethyl	2.36	Spike	P	0 - 38
2333511	Azinphos Methyl	60.9	Spike	P	0 - 62
2333511	Azoxystrobin	11.1	Spike	P	0 - 32
2333511	Bromacil	2.51	Spike	P	0 - 30
2333511	Butylate	15.7	Spike	P	0 - 59
2333511	Caffeine	5.15	Spike	P	0 - 60
2333511	Carbophenothion	9.47	Spike	P	0 - 25
2333511	Carfentrazone Ethyl	22.1	Spike	P	0 - 26
2333511	Chlorfenapyr	2.67	Spike	P	0 - 30
2333511	Chlorpyrifos Ethyl	12.2	Spike	P	0 - 27
2333511	Chlorpyrifos Methyl	14.7	Spike	P	0 - 26
2333511	Coumaphos	13.6	Spike	P	0 - 30
2333511	Cyanazine	31.2	Spike	P	0 - 58
2333511	Cyprodinil	16.8	Spike	P	0 - 30
2333511	Demeton	2.80	Spike	P	0 - 25
2333511	Diazinon	18.6	Spike	P	0 - 29
2333511	Difenoconazole	51.8	Spike	F	0 - 25
2333511	Dimethenamid	26.4	Spike	P	0 - 30
2333511	Dimethomorph	46.3	Spike	F	0 - 30
2333511	Disulfoton	11.4	Spike	P	0 - 33
2333511	Dithiopyr	12.0	Spike	P	0 - 22
2333511	EPTC	21.2	Spike	P	0 - 38
2333511	Ethion	42.7	Spike	P	0 - 79
2333511	Ethoprop	8.60	Spike	P	0 - 23
2333511	Etridiazole	3.18	Spike	P	0 - 30
2333511	Fenamiphos	3.08	Spike	P	0 - 58
2333511	Fenbuconazole	26.8	Spike	P	0 - 37
2333511	Fipronil	16.4	Spike	P	0 - 33
2333511	Fipronil Desulfinyl	12.4	Spike	P	0 - 26
2333511	Fipronil Sulfide	5.88	Spike	P	0 - 37
2333511	Fipronil Sulfone	16.1	Spike	P	0 - 50
2333511	Fluazifop-P-butyl	18.7	Spike	P	0 - 24
2333511	Fludioxonil	24.2	Spike	P	0 - 26
2333511	Flumioxazin	62.5	Spike	F	0 - 37
2333511	Flutolanil	19.9	Spike	P	0 - 26
2333511	Fluxapyroxad	45.4	Spike	F	0 - 34
2333511	Fonofos	14.7	Spike	P	0 - 27
2333511	Hexazinone	13.2	Spike	P	0 - 36
2333511	Imazalil	2.54	Spike	P	0 - 65
2333511	Iprodione	22.0	Spike	P	0 - 33
2333511	Loratadine	59.1	Spike	F	0 - 30
2333511	Malathion	6.90	Spike	P	0 - 44
2333511	Metalaxyl	13.8	Spike	P	0 - 38
2333511	Metolachlor	18.8	Spike	P	0 - 36
2333511	Metribuzin	16.4	Spike	P	0 - 63
2333511	Mevinphos	7.21	Spike	P	0 - 26
2333511	Molinate	4.69	Spike	P	0 - 40
2333511	Myclobutanil	20.4	Spike	P	0 - 21
2333511	Naled	2.41	Spike	P	0 - 26

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P415088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333511	Napropamide	93.5	Spike	F	0 - 30
2333511	Norflurazon	5.78	Spike	P	0 - 24
2333511	Oxadiazon	46.1	Spike	F	0 - 27
2333511	Oxyfluorfen	19.8	Spike	P	0 - 24
2333511	Parathion Ethyl	13.1	Spike	P	0 - 28
2333511	Parathion Methyl	13.7	Spike	P	0 - 27
2333511	Pendimethalin	11.4	Spike	P	0 - 31
2333511	Phenytol	31.3	Spike	F	0 - 30
2333511	Phorate	0.681	Spike	P	0 - 27
2333511	Prodiamine	9.72	Spike	P	0 - 52
2333511	Prometon	10.3	Spike	P	0 - 31
2333511	Prometryn	12.0	Spike	P	0 - 28
2333511	Pronamide	23.9	Spike	P	0 - 26
2333511	Propanil	15.0	Spike	P	0 - 30
2333511	Propargite	53.0	Spike	F	0 - 30
2333511	Propiconazole	10.6	Spike	P	0 - 31
2333511	Pyraflufen Ethyl	17.4	Spike	P	0 - 30
2333511	Pyridaben	18.8	Spike	P	0 - 30
2333511	Pyriproxyfen	123	Spike	F	0 - 50
2333511	Simazine	6.79	Spike	P	0 - 29
2333511	Stirophos	16.5	Spike	P	0 - 30
2333511	Sulfentrazone	12.0	Spike	P	0 - 33
2333511	Tebuconazole	54.4	Spike	F	0 - 44
2333511	Terbufos	5.55	Spike	P	0 - 29
2333511	Terbuthylazine	16.3	Spike	P	0 - 27
2333511	Thiobencarb	17.6	Spike	P	0 - 30
2333511	Triadimefon	11.7	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333217	Acesulfame K	1.94	Spike	P	0 - 30
2333217	AMPA	3.60	Spike	P	0 - 30
2333217	Endothall	2.90	Spike	P	0 - 30
2333217	Glufosinate	7.30	Spike	P	0 - 30
2333217	Glyphosate	3.56	Spike	P	0 - 30
2333217	Sucralose	1.00	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333123	2,4-D	0.143	Spike	P	0 - 30
2333123	2,4,5-T	2.94	Spike	P	0 - 30
2333123	Acetaminophen	1.80	Spike	P	0 - 30
2333123	Acetamiprid	0.910	Spike	P	0 - 30
2333123	Afidopyropen	2.55	Spike	P	0 - 30
2333123	Bentazon	2.42	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P414950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333123	Benzovindiflupyr	6.97	Spike	P	0 - 30
2333123	Carbamazepine	1.86	Spike	P	0 - 30
2333123	Clothianidin	2.70	Spike	P	0 - 30
2333123	Dinotefuran	1.81	Spike	P	0 - 30
2333123	Diuron	4.85	Spike	P	0 - 30
2333123	Fenuron	1.95	Spike	P	0 - 30
2333123	Fluridone	1.68	Spike	P	0 - 30
2333123	Hydrocodone	5.26	Spike	P	0 - 30
2333123	Ibuprofen	4.41	Spike	P	0 - 30
2333123	Imazapyr	7.54	Spike	P	0 - 30
2333123	Imidacloprid	0.924	Spike	P	0 - 30
2333123	Linuron	5.09	Spike	P	0 - 30
2333123	Mandestrobin	2.36	Spike	P	0 - 30
2333123	MCPP	1.41	Spike	P	0 - 30
2333123	Naproxen	18.1	Spike	P	0 - 30
2333123	Primidone	3.41	Spike	P	0 - 30
2333123	Pyraclostrobin	1.57	Spike	P	0 - 30
2333123	Silvex	5.21	Spike	P	0 - 30
2333123	Thiamethoxam	0.388	Spike	P	0 - 30
2333123	Tolfenpyrad	2.48	Spike	P	0 - 30
2333123	Triclopyr	1.94	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: P415490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333231	TDS	3.17	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: P415295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332821	Organic Carbon	0.428	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: 2333217

Field Sample ID: G1TLHR0053

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	73.3	P	30 - 160
EPA 8321B	Endothall-d6	94.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	110	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	97.4	P	30 - 160

Lab Sample ID: 2333219

Field Sample ID: G1TLHR0053

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	39.1	P	20 - 200
EPA 8270E	Simazine-d10	75.2	P	71 - 140
EPA 8270E	Terbufos-d10	74.8	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112710

Included Lab Sample IDs: 2333211

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112716

Included Lab Sample IDs: 2333211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	103	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112724

Included Lab Sample IDs: 2333213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	99.4	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112753

Included Lab Sample IDs: 2333218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.7	100	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	98.6	99.1	P/P	90 - 110
Strontium	103	104	P/P	90 - 110
Tin	100	101	P/P	90 - 110
Titanium	100	99.1	P/P	90 - 110
Vanadium	100	101	P/P	90 - 110
Zinc	102	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112755

Included Lab Sample IDs: 2333218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	98.2	98.9	P/P	90 - 110
Arsenic	99.1	99.2	P/P	90 - 110
Barium	98.3	99.3	P/P	90 - 110
Beryllium	94.2	95.7	P/P	90 - 110
Boron	98.5	95.8	P/P	90 - 110
Cadmium	97.2	98.4	P/P	90 - 110
Chromium	95.5	97.0	P/P	90 - 110
Cobalt	97.2	98.1	P/P	90 - 110
Copper	98.7	99.8	P/P	90 - 110
Lead	98.7	98.2	P/P	90 - 110
Manganese	96.8	97.4	P/P	90 - 110
Molybdenum	98.1	98.2	P/P	90 - 110
Nickel	98.0	99.9	P/P	90 - 110
Selenium	96.8	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112755

Included Lab Sample IDs: 2333218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	99.2	99.7	P/P	90 - 110
Thallium	98.6	96.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112791

Included Lab Sample IDs: 2333217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	102	P/P	50 - 150
2,4,5-T	114	106	P/P	50 - 150
Acetaminophen	108	107	P/P	60 - 160
Acetamiprid	89.9	89.1	P/P	50 - 150
Afidopyropen	82.1	84.3	P/P	50 - 150
Bentazon	110	108	P/P	50 - 160
Benzovindiflupyr	78.0	80.7	P/P	50 - 150
Carbamazepine	84.9	86.7	P/P	60 - 150
Clothianidin	95.5	96.8	P/P	60 - 150
Dinotefuran	94.3	95.1	P/P	50 - 150
Diuron	90.6	90.2	P/P	60 - 160
Fenuron	87.7	86.1	P/P	60 - 150
Fluridone	96.0	97.2	P/P	60 - 160
Hydrocodone	94.8	94.4	P/P	60 - 150
Ibuprofen	99.7	99.0	P/P	50 - 160
Imazapyr	88.0	98.7	P/P	50 - 150
Imidacloprid	88.6	90.7	P/P	60 - 150
Linuron	78.2	74.3	P/P	60 - 150
Mandestrobin	81.9	81.2	P/P	50 - 150
MCPP	108	112	P/P	50 - 150
Naproxen	116	111	P/P	50 - 160
Primidone	106	96.4	P/P	60 - 150
Pyraclostrobin	79.3	78.0	P/P	60 - 150
Silvex	107	110	P/P	50 - 150
Thiamethoxam	91.1	91.7	P/P	50 - 150
Tolfenpyrad	84.0	85.6	P/P	60 - 150
Triclopyr	111	101	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A112815

Included Lab Sample IDs: 2333217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.4	99.4	P/P	60 - 160
Sucralose	97.0	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A112816

Included Lab Sample IDs: 2333217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	104	P/P	60 - 160
Endothall	105	110	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A112816
Included Lab Sample IDs: 2333217

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glufosinate	99.2	104	P/P	60 - 160
Glyphosate	105	105	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112849
Included Lab Sample IDs: 2333212

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A112854
Included Lab Sample IDs: 2333218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	106	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A112869
Included Lab Sample IDs: 2333212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.0	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A112906
Included Lab Sample IDs: 2333211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A112906
Included Lab Sample IDs: 2333211

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

Reference Method: EPA 8270E
Run ID: A112908
Included Lab Sample IDs: 2333219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.8		P	80 - 120
Alachlor	96.7		P	80 - 120
Ametryn	81.0		P	80 - 120
Atrazine	97.7		P	80 - 120
Atrazine Desethyl	93.3		P	80 - 120
Azinphos Methyl	88.1		P	80 - 120
Azoxystrobin	98.7		P	80 - 120
Bromacil	93.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112908
Included Lab Sample IDs: 2333219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Butylate	99.9		P	80 - 120
Caffeine	96.6		P	80 - 120
Carbophenothion	113		P	80 - 120
Carfentrazone Ethyl	96.4		P	80 - 120
Chlorfenapyr	112		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Coumaphos	101		P	80 - 120
Cyanazine	87.5		P	80 - 120
Cyprodinil	90.3		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	97.4		P	80 - 120
Difenoconazole	88.0		P	80 - 120
Dimethenamid	98.8		P	80 - 120
Dimethomorph	96.9		P	80 - 120
Disulfoton	99.4		P	80 - 120
Dithiopyr	97.0		P	80 - 120
EPTC	102		P	80 - 120
Ethion	96.6		P	80 - 120
Ethoprop	101		P	80 - 120
Etridiazole	92.0		P	80 - 120
Fenamiphos	99.1		P	80 - 120
Fenbuconazole	91.4		P	80 - 120
Fipronil	98.6		P	80 - 120
Fipronil Desulfinyl	98.2		P	80 - 120
Fipronil Sulfide	109		P	80 - 120
Fipronil Sulfone	104		P	80 - 120
Fluazifop-P-butyl	103		P	80 - 120
Fludioxonil	102		P	80 - 120
Flumioxazin	80.2		P	80 - 120
Flutolanil	88.8		P	80 - 120
Fluxapyroxad	97.1		P	80 - 120
Fonofos	98.3		P	80 - 120
Hexazinone	99.6		P	80 - 120
Imazalil	111		P	80 - 120
Iprodione	96.6		P	80 - 120
Loratadine	101		P	80 - 120
Malathion	106		P	80 - 120
Metalaxyl	99.1		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	92.2		P	80 - 120
Mevinphos	109		P	80 - 120
Molinate	103		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	106		P	80 - 120
Napropamide	93.1		P	80 - 120
Norflurazon	99.6		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	93.0		P	80 - 120
Parathion Ethyl	95.9		P	80 - 120
Parathion Methyl	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112908
Included Lab Sample IDs: 2333219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pendimethalin	97.3		P	80 - 120
Phenytoin	95.7		P	80 - 120
Phorate	93.7		P	80 - 120
Prodiamine	86.3		P	80 - 120
Prometon	86.9		P	80 - 120
Prometryn	82.7		P	80 - 120
Pronamide	98.2		P	80 - 120
Propanil	91.6		P	80 - 120
Propargite	93.3		P	80 - 120
Propiconazole	93.5		P	80 - 120
Pyraflufen Ethyl	97.6		P	80 - 120
Pyridaben	100		P	80 - 120
Pyriproxyfen	91.3		P	80 - 120
Simazine	95.1		P	80 - 120
Stirophos	109		P	80 - 120
Sulfentrazone	91.8		P	80 - 120
Tebuconazole	93.8		P	80 - 120
Terbufos	96.4		P	80 - 120
Terbutylazine	95.8		P	80 - 120
Thiobencarb	96.4		P	80 - 120
Triadimefon	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A112925
Included Lab Sample IDs: 2333211

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112973
Included Lab Sample IDs: 2333212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A112990
Included Lab Sample IDs: 2333212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113042
Included Lab Sample IDs: 2333212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.5	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	101				10.5	
EPA 180.1 Rev. 2.0	Turbidity	96.7				6.30	
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	102	101	101		0.739	
	Sulfate	101	101	101			
EPA 350.1 Rev. 2.0	Ammonia-N	100	101	99.4			1.17
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106					5.95
EPA 353.2 Rev. 2.0	NO2NO3-N	100	100	99.5			1.00
EPA 365.1 Rev. 2.0	Total-P	104	103	103			0.321
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5	103	102			0.978
EPA 8270E	Acetochlor	95.9	104	85.4			19.6
	Alachlor	86.7	96.1	76.9			22.2
	Ametryn	95.9	116	99.4			15.4
	Atrazine	84.3					24.9
	Atrazine Desethyl	46.5	22.9	24.7			2.36
	Azinphos Methyl	138	148	78.7			60.9
	Azoxystrobin	106	80.6	99.9			11.1
	Bromacil	56.0	59.6	57.5			2.51
	Butylate	52.2	50.6	59.2			15.7
	Caffeine	91.9	96.2	91.1			5.15
	Carbophenothion	118	113	103			9.47
	Carfentrazone Ethyl	114	125	100			22.1
	Chlorfenapyr	85.9	83.5	85.7			2.67
	Chlorpyrifos Ethyl	93.8	91.8	81.3			12.2
	Chlorpyrifos Methyl	106	99.1	85.5			14.7
	Coumaphos	155	145	126			13.6
	Cyanazine	86.0	80.6	58.9			31.2
	Cyprodinil	84.4	90.6	76.5			16.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Demeton	80.4	127	123		2.80
	Diazinon	93.2	111	91.8		18.6
	Difenoconazole	141	170	99.9		51.8
	Dimethenamid	77.7	87.1	66.7		26.4
	Dimethomorph	94.3	88.4	142		46.3
	Disulfoton	90.3	89.0	79.5		11.4
	Dithiopyr	88.3				12.0
	EPTC	55.0	44.9	55.6		21.2
	Ethion	77.8	71.6	46.5		42.7
	Ethoprop	81.4	91.8	84.2		8.60
	Etridiazole	115	124	120		3.18
	Fenamiphos	104	101	104		3.08
	Fenbuconazole	110	124	92.3		26.8
	Fipronil	91.5	103	86.5		16.4
	Fipronil Desulfinyl	89.5	95.7	81.8		12.4
	Fipronil Sulfide	90.8	87.8	81.9		5.88
	Fipronil Sulfone	99.2	91.7	74.4		16.1
	Fluazifop-P-butyl	95.5	103	85.6		18.7
	Fludioxonil	93.4	97.1	76.2		24.2
	Flumioxazin	132	158	82.7		62.5
	Flutolanil	88.9	91.9	72.5		19.9
	Fluxapyroxad	115	131	78.9		45.4
	Fonofos	86.4	95.4	82.3		14.7
	Hexazinone	91.1	88.2	70.9		13.2
	Imazalil	80.9	73.8	75.7		2.54
	Iprodione	115	140	112		22.0
	Loratadine	84.1	88.5	163		59.1
	Malathion	110	99.9	93.2		6.90
	Metalaxyl	81.0	80.1	67.0		13.8
	Metolachlor	87.9	90.7	73.1		18.8
	Metribuzin	80.9	75.1	88.5		16.4
	Mevinphos	71.7	78.2	72.7		7.21
	Molinate	73.0	73.0	69.6		4.69
	Myclobutanil	99.5	98.9	75.8		20.4
	Naled	65.5	77.2	75.3		2.41
	Napropamide	77.3	75.4	27.3		93.5
	Norflurazon	96.1				5.78
	Oxadiazon	77.5				46.1
	Oxyfluorfen	111	120	98.6		19.8
	Parathion Ethyl	87.8	85.2	74.8		13.1
	Parathion Methyl	105	114	99.4		13.7
	Pendimethalin	91.7	105	93.8		11.4
	Phenytoin	18.1	45.6	33.3		31.3
	Phorate	67.4	69.1	68.6		0.681
	Prodiamine	97.9	101	90.0		9.72
	Prometon	95.4	106	95.4		10.3
	Prometryn	76.8	84.8	75.2		12.0
	Pronamide	94.9	101	79.7		23.9
	Propanil	79.4	81.7	70.3		15.0
	Propargite	110	115	66.8		53.0
	Propiconazole	96.1				10.6
	Pyraflufen Ethyl	107	122	103		17.4
	Pyridaben	128	116	95.7		18.8
	Pyriproxyfen	106	105	25.0		123

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Simazine	75.1	190	178			6.79
	Stirophos	87.4	67.7	57.4			16.5
	Sulfentrazone	31.3					12.0
	Tebuconazole	100	102	50.5			54.4
	Terbufos	102	105	99.0			5.55
	Terbutylazine	84.1	90.5	76.8			16.3
	Thiobencarb	81.6	84.6	70.9			17.6
	Triadimefon	80.7	75.2	66.9			11.7
EPA 8321B	2,4-D	88.3	121	121			0.143
	2,4,5-T	82.6	112	109			2.94
	Acesulfame K	93.0	88.2	86.5			1.94
	Acetaminophen	81.6	121	123			1.80
	Acetamiprid	69.6	75.6	74.9			0.910
	Afidopyropen	59.1	63.1	61.5			2.55
	AMPA	99.7	113	109			3.60
	Bentazon	93.8					2.42
	Benzovindiflupyr	52.5	61.6	57.5			6.97
	Carbamazepine	66.1	91.4	93.5			1.86
	Clothianidin	76.6	104	100			2.70
	Dinotefuran	78.4	126	124			1.81
	Diuron	66.8	80.8	85.3			4.85
	Endothall	96.9	98.4	95.6			2.90
	Fenuron	72.1	76.9	78.4			1.95
	Fluridone	75.0	87.4	85.6			1.68
	Glufosinate	94.7	100	108			7.30
	Glyphosate	99.2	105	101			3.56
	Hydrocodone	75.3	93.2	98.2			5.26
	Ibuprofen	84.2	92.1	96.3			4.41
	Imazapyr	84.7					7.54
	Imidacloprid	70.8	126	124			0.924
	Linuron	61.3	74.7	71.0			5.09
	Mandestrobin	53.5	62.6	61.1			2.36
	MCPP	91.7	133	131			1.41
	Naproxen	78.9	94.3	113			18.1
	Primidone	81.6	109	106			3.41
	Pyraclostrobin	50.9	57.9	57.0			1.57
	Silvex	75.8	104	109			5.21
	Sucralose	94.6	97.5	96.5			1.00
	Thiamethoxam	73.9	126	126			0.388
	Tolfenpyrad	40.5	44.6	45.8			2.48
	Triclopyr	84.0	126	123			1.94
SM 2320 B-2011	Total Alkalinity	103				0.100	
SM 2540 C-2011	TDS					3.17	
SM 4500-F- C-2011	Fluoride	102	103	103			0.0
SM 5310 B-2011	Organic Carbon	93.2	94.5	95.0			0.428

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2333211
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2333211
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2333218

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	2333218
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2333211
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2333211
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2333212
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2333212
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2333212
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2333212
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2333213
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2333219
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2333217
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2333211
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2333218
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2333211
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2333211
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2333211
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2333212

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	06/08/2022			06/09/2022 14:42	Samantha L Bates	2333211
EPA 180.1 Rev. 2.0	06/08/2022			06/09/2022 13:38	Khloe J Berg	2333211
EPA 200.7 Rev. 4.4	06/08/2022	06/10/2022 10:12	Megan Whitefoot	06/11/2022 17:07	Betina Topolski	2333218
EPA 200.8 Rev. 5.4	06/08/2022	06/10/2022 10:12	Megan Whitefoot	06/10/2022 22:17	Alexander Thompson	2333218
	06/08/2022	06/15/2022 09:35	Megan Whitefoot	06/15/2022 17:25	Alexander Thompson	2333218
EPA 300.0 Rev. 2.1	06/08/2022			06/16/2022 03:50	Anna M. Plaviak	2333211
EPA 350.1 Rev. 2.0	06/08/2022			06/22/2022 15:21	Judith K. Clark	2333212
EPA 351.2 Rev. 2.0	06/08/2022	06/20/2022 16:20	Samantha L Bates	06/21/2022 13:43	Alexandra J Mattheus	2333212
EPA 353.2 Rev. 2.0	06/08/2022			06/24/2022 12:04	Beverly Y. Sanders	2333212
EPA 365.1 Rev. 2.0	06/08/2022	06/13/2022 16:25	Simonne.V. Calhoun	06/15/2022 15:30	James L Waggerby	2333212
EPA 365.1 Rev. 2.0 dissolved	06/08/2022			06/09/2022 16:54	Nathaniel J Jones	2333213
EPA 8270E	06/08/2022	06/14/2022 08:00	Fe-Val Siddell	06/17/2022 15:06	Michael Poppell	2333219
EPA 8321B	06/08/2022	06/10/2022 13:00	Hoor Shaik	06/11/2022 12:53	Juyoung Kim	2333217
	06/08/2022	06/13/2022 12:00	Umesh Chiluwal	06/13/2022 17:43	Umesh Chiluwal	2333217
	06/08/2022	06/13/2022 12:00	Umesh Chiluwal	06/14/2022 03:51	Umesh Chiluwal	2333217
SM 2320 B-2011	06/08/2022			06/17/2022 00:02	Dale L. Simmons	2333211
SM 2340 B-2011	06/08/2022			06/11/2022 17:07	Betina Topolski	2333218
SM 2540 C-2011	06/08/2022			06/14/2022 14:14	Yijie Li	2333211
SM 2540 D-2011	06/08/2022			06/14/2022 14:14	Yijie Li	2333211
SM 4500-F- C-2011	06/08/2022			06/17/2022 00:02	Dale L. Simmons	2333211
SM 5310 B-2011	06/08/2022			06/15/2022 21:43	Khloe J Berg	2333212