

Chemical Analysis Report

SO-DIST-2022-07-12-01

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

Event Description: **2022 SMP: Lake Lelia LVI**
Request ID: **RQ-2022-07-11-49**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
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Date Certified: 02-AUG-2022 11:16



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Lake Lelia at Center

Collection Date/Time: 07/11/2022 10:25

Field ID: G4SD0218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340499	DEP SOP: NU-094-1	Color (true)	12		PCU	P416500	
	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P416508	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P416960	
		Sulfate	17		mg SO4/L	P416964	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P416839	
	SM 2540 C-2011	TDS	84		mg/L	P416903	
	SM 2540 D-2011	TSS	4	I	mg/L	P416817	
	SM 4500-F- C-2011	Fluoride	0.055	I	mg F/L	P417357	MS
2340500	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P416931	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P416705	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P416741	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P416691	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P416723	
2340501	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P416586	
2340503	EPA 8321B	2,4-D	0.031		ug/L	P416544	
		Acesulfame K	0.11	I	ug/L	P416474	
		2,4,5-T	0.0040	U	ug/L	P416544	
		AMPA	0.10	U	ug/L	P416474	
		Acetaminophen	0.0086	I	ug/L	P416544	
		Acetamiprid	0.0020	U	ug/L	P416544	
		Endothall	0.25	U	ug/L	P416474	
		Glufosinate	0.10	U	ug/L	P416474	
		Glyphosate	0.10	U	ug/L	P416474	
		Afidopyrophen	0.0020	U	ug/L	P416544	
		Bentazon	0.0035		ug/L	P416544	
		Sucralose	2.1		ug/L	P416474	
		Benzovindiflupyr	0.0020	U	ug/L	P416544	
		Carbamazepine	0.0025	I	ug/L	P416544	
		Clothianidin	0.018		ug/L	P416544	
		Dinotefuran	0.0020	U	ug/L	P416544	
		Diuron	0.021		ug/L	P416544	
		Fenuron	0.032	U	ug/L	P416544	
		Fluridone	0.0045		ug/L	P416544	
		Imazapyr	0.0040	U	ug/L	P416544	
		Hydrocodone	0.0020	U	ug/L	P416544	
		Ibuprofen	0.080	U	ug/L	P416544	
		Imidacloprid	0.010		ug/L	P416544	
		Linuron	0.0040	U	ug/L	P416544	
		Mandestrobin	0.0020	U	ug/L	P416544	
		MCP	0.0040	U	ug/L	P416544	
		Naproxen	0.0080	U	ug/L	P416544	
		Primidone	0.012	I	ug/L	P416544	
		Pyraclostrobin	0.0020	U	ug/L	P416544	

Field ID: G4SD0218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340503	EPA 8321B	Silvex	0.0040	U	ug/L	P416544	
		Thiamethoxam	0.012		ug/L	P416544	
		Tolfenpyrad	0.0020	U	ug/L	P416544	
		Triclopyr	0.0040	U	ug/L	P416544	
2340504	EPA 200.7 Rev. 4.4	Calcium	11.3		mg/L	P416617	
		Iron	30	U	ug/L	P416617	
		Magnesium	2.97		mg/L	P416617	
		Potassium	5.3		mg/L	P416617	
		Sodium	9.2		mg/L	P416617	
		Strontium	102		ug/L	P416617	
		Tin	3.0	U	ug/L	P416617	
		Titanium	0.75	U	ug/L	P416617	
		Vanadium	2.0	U	ug/L	P416617	
		Zinc	5.0	U	ug/L	P416617	
	EPA 200.8 Rev. 5.4	Aluminum	41		ug/L	P416617	
		Antimony	0.077	I	ug/L	P416617	
		Arsenic	0.67		ug/L	P416617	
		Barium	2.76		ug/L	P416617	
		Beryllium	0.010	U	ug/L	P416617	
		Boron	47.1		ug/L	P416617	
		Cadmium	0.020	U	ug/L	P416617	
		Chromium	0.40	U	ug/L	P416617	
		Cobalt	0.026	I	ug/L	P416617	
		Copper	0.40	U	ug/L	P416617	
		Lead	0.20	U	ug/L	P416617	
		Manganese	11.2		ug/L	P416617	
		Molybdenum	0.35	I	ug/L	P416617	
		Nickel	0.50	U	ug/L	P416617	
		Selenium	0.20	U	ug/L	P416617	
		Silver	0.010	U	ug/L	P416617	
		Thallium	0.10	U	ug/L	P416617	
		Hardness	40.4		mg/L	P416617	
2340505	SM 2340 B-2011						
	EPA 8270E	Acetochlor	0.24	U	ng/L	P416699	
		Alachlor	0.24	U	ng/L	P416699	
		Ametryn	0.64	I	ng/L	P416699	
		Atrazine	7.8		ng/L	P416699	
		Atrazine Desethyl	1.7	I	ng/L	P416699	
		Azinphos Methyl	1.9	U	ng/L	P416699	
		Azoxystrobin	1.2	I	ng/L	P416699	
		Bromacil	1.6	I	ng/L	P416699	
		Butylate	0.39	U	ng/L	P416699	
		Caffeine**	7.3	U	ng/L	P416699	
		Carbophenothion	0.19	U	ng/L	P416699	
		Carfentrazone Ethyl	0.097	U	ng/L	P416699	
		Chlorfenapyr	0.17	U	ng/L	P416699	

Field ID: G4SD0218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340505	EPA 8270E	Chlorpyrifos Ethyl	0.24	U	ng/L	P416699	
		Chlorpyrifos Methyl	0.049	U	ng/L	P416699	
		Coumaphos	0.49	U	ng/L	P416699	
		Cyanazine	3.2	U	ng/L	P416699	
		Cyprodinil	0.097	U	ng/L	P416699	
		Demeton	1.5	U	ng/L	P416699	
		Diazinon	0.12	U	ng/L	P416699	
		Difenoconazole	0.58	U	ng/L	P416699	
		Dimethenamid	0.097	U	ng/L	P416699	
		Dimethomorph	0.17	UJ	ng/L	P416699	MS
		Disulfoton	0.49	U	ng/L	P416699	
		Dithiopyr	0.36	IV	ng/L	P416699	
		EPTC	1.2	U	ng/L	P416699	
		Ethion	0.15	U	ng/L	P416699	
		Ethoprop	0.097	U	ng/L	P416699	
		Etridiazole	0.15	U	ng/L	P416699	
		Fenamiphos	0.49	U	ng/L	P416699	
		Fenbuconazole	0.47	I	ng/L	P416699	
		Fipronil	0.24	U	ng/L	P416699	
		Fipronil Desulfinyl**	0.12	U	ng/L	P416699	
		Fipronil Sulfide	0.15	U	ng/L	P416699	
		Fipronil Sulfone	0.15	U	ng/L	P416699	
		Fluazifop-P-butyl	0.097	U	ng/L	P416699	
		Fludioxonil	0.12	U	ng/L	P416699	
		Flumioxazin	1.7	U	ng/L	P416699	
		Flutolanil	0.097	U	ng/L	P416699	
		Fluxapyroxad	0.097	U	ng/L	P416699	
		Fonofos	0.19	U	ng/L	P416699	
		Hexazinone	0.49	U	ng/L	P416699	
		Imazalil	0.73	U	ng/L	P416699	
		Iprodione	0.58	U	ng/L	P416699	
		Loratadine**	0.097	UJ	ng/L	P416699	LCS
		Malathion	0.34	U	ng/L	P416699	
		Metalaxyl	26		ng/L	P416699	
		Metolachlor	1.1	I	ng/L	P416699	
		Metribuzin	2.4	U	ng/L	P416699	
		Mevinphos	1.0	U	ng/L	P416699	
		Molinate	0.29	U	ng/L	P416699	
		Myclobutanil	0.24	U	ng/L	P416699	
		Naled	1.5	U	ng/L	P416699	
		Napropamide	0.39	U	ng/L	P416699	
		Norflurazon	35		ng/L	P416699	
		Oxadiazon	0.29	U	ng/L	P416699	
		Oxyfluorfen	0.15	U	ng/L	P416699	
		Parathion Ethyl	0.24	U	ng/L	P416699	

Field ID: G4SD0218

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2340505	EPA 8270E	Parathion Methyl	0.54	U	ng/L	P416699	LCS, MS
		Pendimethalin	0.97	U	ng/L	P416699	
		Phenytain**	3.4	UJ	ng/L	P416699	
		Phorate	0.51	U	ng/L	P416699	
		Prodiamine	0.17	U	ng/L	P416699	
		Prometon	0.88	U	ng/L	P416699	
		Prometryn	0.19	U	ng/L	P416699	
		Pronamide	0.15	U	ng/L	P416699	
		Propanil	0.12	U	ng/L	P416699	
		Propargite	1.5	UJ	ng/L	P416699	
		Propiconazole	0.84	I	ng/L	P416699	
		Pyraflufen Ethyl	0.24	U	ng/L	P416699	
		Pyridaben	0.44	U	ng/L	P416699	
		Pyriproxyfen	0.12	U	ng/L	P416699	
		Simazine	4.1		ng/L	P416699	
		Stirophos	0.12	UJ	ng/L	P416699	MS
		Sulfentrazone	0.49	U	ng/L	P416699	
		Tebuconazole	0.49	UJ	ng/L	P416699	RPD
		Terbufos	0.097	U	ng/L	P416699	
		Terbutylazine	0.41	U	ng/L	P416699	
		Thiobencarb	0.58	U	ng/L	P416699	
		Triadimefon	0.24	U	ng/L	P416699	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was reanalyzed out of holding time because of analytical difficulties.

EPA 8270E: V - Due to the presence of dithiopyr in both the Method Blank and the sample. 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: P416500

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416508

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416617

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: P416617

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416960

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416964

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416931

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416741

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416691

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416586

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

Reference Method: EPA 8270E
Batch ID: P416699

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416699

Component	Result	Code	Units
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.26	I	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416699

Component	Result	Code	Units
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	2.5	U	ng/L
Metribuzin	2.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P416699

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

Reference Method: EPA 8321B
 Batch ID: P416474

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P416544

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: P416839

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

Reference Method: SM 2540 C-2011

Batch ID: P416903

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P416817

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P417357

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P416723

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: P416500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.1		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416508

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	101		P	85 - 115
Magnesium	99.3		P	85 - 115
Potassium	104		P	85 - 115
Sodium	103		P	85 - 115
Strontium	106		P	85 - 115
Tin	99.9		P	85 - 115
Titanium	104		P	85 - 115
Vanadium	103		P	85 - 115
Zinc	99.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	101		P	85 - 115
Barium	97.6		P	85 - 115
Beryllium	95.3		P	85 - 115
Boron	103		P	85 - 115
Cadmium	99.4		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	103		P	85 - 115
Copper	97.9		P	85 - 115
Lead	99.5		P	85 - 115
Manganese	104		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	102		P	85 - 115
Silver	104		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416960

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416964

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416931

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416691

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: P416586

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

Reference Method: EPA 8270E
Batch ID: P416699

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.7		P	65 - 124
Alachlor	95.5		P	61 - 121
Ametryn	88.4		P	52 - 216
Atrazine	91.4		P	68 - 133
Atrazine Desethyl	57.2		P	15 - 160
Azinphos Methyl	121		P	40 - 292
Azoxystrobin	98.1		P	12 - 242
Bromacil	94.2		P	54 - 167
Butylate	58.7		P	14 - 94.0
Caffeine	74.4		P	10 - 226
Carbophenothion	92.4		P	56 - 129
Carfentrazone Ethyl	137		P	60 - 141
Chlorfenapyr	87.0		P	50 - 150
Chlorpyrifos Ethyl	93.1		P	52 - 122
Chlorpyrifos Methyl	94.6		P	66 - 117
Coumaphos	124		P	50 - 220

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P416699

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	85.6		P	43 - 245
Cyprodinil	94.8		P	50 - 150
Demeton	73.7		P	43 - 188
Diazinon	100		P	69 - 131
Difenoconazole	161		P	34 - 231
Dimethenamid	80.7		P	55 - 118
Dimethomorph	92.0		P	50 - 150
Disulfoton	88.7		P	38 - 141
Dithiopyr	98.0		P	42 - 116
EPTC	48.7		P	18 - 85.0
Ethion	103		P	10 - 131
Ethoprop	80.4		P	65 - 129
Etridiazole	51.2		P	50 - 150
Fenamiphos	93.5		P	31 - 137
Fenbuconazole	128		P	57 - 160
Fipronil	96.8		P	62 - 132
Fipronil Desulfinyl	96.5		P	57 - 131
Fipronil Sulfide	83.4		P	15 - 138
Fipronil Sulfone	93.7		P	21 - 134
Fluazifop-P-butyl	102		P	54 - 133
Fludioxonil	94.8		P	58 - 127
Flumioxazin	153		P	33 - 300
Flutolanil	99.9		P	42 - 130
Fluxapyroxad	101		P	23 - 141
Fonofos	84.3		P	58 - 119
Hexazinone	103		P	68 - 172
Imazalil	80.3		P	48 - 283
Iprodione	134		P	38 - 140
Loratadine	162		F	50 - 150
Malathion	104		P	40 - 137
Metalaxyl	92.5		P	21 - 129
Metolachlor	89.9		P	55 - 122
Metribuzin	94.7		P	38 - 187
Mevinphos	64.9		P	54 - 134
Molinate	68.1		P	41 - 97.0
Myclobutanil	100		P	56 - 125
Naled	82.8		P	10 - 108
Napropamide	85.1		P	50 - 150
Norflurazon	105		P	61 - 126
Oxadiazon	85.7		P	40 - 119
Oxyfluorfen	114		P	61 - 153
Parathion Ethyl	101		P	59 - 130
Parathion Methyl	102		P	65 - 155
Pendimethalin	105		P	49 - 138
Phenytol	42.7		F	50 - 200
Phorate	80.3		P	54 - 161
Prodiamine	77.3		P	33 - 161
Prometon	82.8		P	48 - 140
Prometryn	94.4		P	55 - 134
Pronamide	92.8		P	66 - 137
Propanil	92.4		P	50 - 150
Propargite	123		P	50 - 200

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P416699

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propiconazole	65.3		P	36 - 150
Pyraflufen Ethyl	121		P	70 - 138
Pyridaben	126		P	50 - 200
Pyriproxyfen	122		P	10 - 165
Simazine	91.8		P	57 - 145
Stirophos	98.0		P	50 - 150
Sulfentrazone	115		P	34 - 140
Tebuconazole	97.6		P	10 - 127
Terbufos	102		P	59 - 138
Terbuthylazine	93.6		P	68 - 119
Thiobencarb	89.4		P	50 - 150
Triadimefon	95.6		P	50 - 150

Reference Method: EPA 8321B

Batch ID: P416474

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	88.1		P	40 - 150
AMPA	113		P	40 - 150
Endothall	80.3		P	40 - 150
Glufosinate	111		P	40 - 150
Glyphosate	108		P	40 - 150
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416544

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.5		P	40 - 150
2,4,5-T	71.2		P	40 - 150
Acetaminophen	93.5		P	30 - 150
Acetamiprid	85.0		P	40 - 150
Afidopyropen	60.7		P	30 - 150
Bentazon	97.0		P	30 - 150
Benzovindiflupyr	90.0		P	40 - 150
Carbamazepine	93.0		P	40 - 150
Clothianidin	100		P	40 - 150
Dinotefuran	104		P	40 - 150
Diuron	84.7		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	99.3		P	40 - 150
Hydrocodone	97.9		P	40 - 150
Ibuprofen	82.0		P	40 - 150
Imazapyr	94.2		P	40 - 150
Imidacloprid	110		P	40 - 150
Linuron	104		P	40 - 150
Mandestrobin	89.0		P	40 - 150
MCPP	83.2		P	40 - 150
Naproxen	64.4		P	40 - 150
Primidone	101		P	40 - 150
Pyraclostrobin	81.3		P	40 - 150
Silvex	67.7		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P416544

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	99.6		P	40 - 150
Tolfenpyrad	44.7		P	30 - 150
Triclopyr	77.4		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P416839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P417357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P416723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P416617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340504	Calcium	98.9		P	80 - 120
2340504	Iron	102		P	80 - 120
2340504	Magnesium	103		P	80 - 120
2340504	Potassium	101		P	80 - 120
2340504	Sodium	101		P	80 - 120
2340504	Strontium	107		P	80 - 120
2340504	Tin	99.3		P	80 - 120
2340504	Titanium	106		P	80 - 120
2340504	Vanadium	105		P	80 - 120
2340504	Zinc	101		P	80 - 120
2340703	Calcium	96.4		P	80 - 120
2340703	Iron	99.9	98.3	P/P	80 - 120
2340703	Magnesium	98.6	96.8	P/P	80 - 120
2340703	Potassium	98.9	99.4	P/P	80 - 120
2340703	Sodium	103	101	P/P	80 - 120
2340703	Strontium	104	104	P/P	80 - 120
2340703	Tin	96.3	95.8	P/P	80 - 120
2340703	Titanium	101	100	P/P	80 - 120
2340703	Vanadium	101	100	P/P	80 - 120
2340703	Zinc	95.1	94.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P416617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340504	Aluminum	100		P	80 - 120
2340504	Antimony	104		P	80 - 120
2340504	Arsenic	99.4		P	80 - 120
2340504	Barium	98.2		P	80 - 120
2340504	Beryllium	98.0		P	80 - 120
2340504	Boron	98.0		P	80 - 120
2340504	Cadmium	99.2		P	80 - 120
2340504	Chromium	98.3		P	80 - 120
2340504	Cobalt	99.3		P	80 - 120
2340504	Copper	95.2		P	80 - 120
2340504	Lead	98.3		P	80 - 120
2340504	Manganese	100		P	80 - 120
2340504	Molybdenum	99.1		P	80 - 120
2340504	Nickel	97.2		P	80 - 120
2340504	Selenium	99.8		P	80 - 120
2340504	Silver	99.4		P	80 - 120
2340504	Thallium	101		P	80 - 120
2340703	Aluminum	103	102	P/P	80 - 120
2340703	Antimony	107	104	P/P	80 - 120
2340703	Arsenic	99.3	98.6	P/P	80 - 120
2340703	Barium	99.1	104	P/P	80 - 120
2340703	Beryllium	93.4	92.5	P/P	80 - 120
2340703	Boron	108	105	P/P	80 - 120
2340703	Cadmium	103	100	P/P	80 - 120
2340703	Chromium	102	100	P/P	80 - 120
2340703	Cobalt	101	99.5	P/P	80 - 120
2340703	Copper	93.9	92.3	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P416617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340703	Lead	100	99.0	P/P	80 - 120
2340703	Manganese	104	102	P/P	80 - 120
2340703	Molybdenum	103	102	P/P	80 - 120
2340703	Nickel	98.4	97.4	P/P	80 - 120
2340703	Selenium	97.0	97.6	P/P	80 - 120
2340703	Silver	104	101	P/P	80 - 120
2340703	Thallium	104	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P416960

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340509	Chloride	99.1		P	90 - 110
2340627	Chloride	97.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P416964

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340509	Sulfate	96.1		P	90 - 110
2340627	Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P416931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340500	Ammonia-N	97.4	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P416705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340081	Kjeldahl Nitrogen	98.7	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P416741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340476	NO2NO3-N	99.2	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P416691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340467	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P416586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340511	O-Phosphate-P	97.3	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P416699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340505	Acetochlor	102	107	P/P	65 - 124
2340505	Alachlor	91.8	91.7	P/P	61 - 121
2340505	Ametryn	82.3	80.5	P/P	52 - 216
2340505	Atrazine Desethyl	60.9	62.6	P/P	15 - 160
2340505	Azinphos Methyl	142	142	P/P	40 - 292
2340505	Azoxystrobin	142	127	P/P	12 - 242
2340505	Bromacil	82.7	98.9	P/P	54 - 167
2340505	Butylate	59.9	60.8	P/P	14 - 94.0
2340505	Caffeine	75.3	76.8	P/P	10 - 226
2340505	Carbophenothion	82.5	82.4	P/P	49 - 122
2340505	Carfentrazone Ethyl	123	110	P/P	53 - 138
2340505	Chlorfenapyr	64.1	59.5	P/P	50 - 150
2340505	Chlorpyrifos Ethyl	67.2	68.2	P/P	52 - 122
2340505	Chlorpyrifos Methyl	83.5	81.3	P/P	66 - 117
2340505	Coumaphos	100	81.3	P/P	50 - 220
2340505	Cyanazine	85.9	85.7	P/P	43 - 245
2340505	Cyprodinil	94.9	89.6	P/P	50 - 150
2340505	Demeton	97.2	77.2	P/P	43 - 188
2340505	Diazinon	111	119	P/P	69 - 131
2340505	Difenoconazole	160	143	P/P	34 - 231
2340505	Dimethenamid	87.0	82.1	P/P	55 - 118
2340505	Dimethomorph	154	132	F/P	50 - 150
2340505	Disulfoton	91.8	84.3	P/P	38 - 141
2340505	Dithiopyr	99.7	90.9	P/P	42 - 116
2340505	EPTC	54.6	57.6	P/P	18 - 85.0
2340505	Ethion	50.7	34.5	P/P	10 - 131
2340505	Ethoprop	104	99.1	P/P	65 - 129
2340505	Etridiazole	70.7	76.8	P/P	50 - 150
2340505	Fenamiphos	59.3	51.0	P/P	31 - 137
2340505	Fenbuconazole	109	88.5	P/P	57 - 160
2340505	Fipronil	97.0	90.8	P/P	62 - 132
2340505	Fipronil Desulfinyl	96.4	91.9	P/P	57 - 131
2340505	Fipronil Sulfide	59.3	49.8	P/P	15 - 138
2340505	Fipronil Sulfone	79.1	73.4	P/P	21 - 134
2340505	Fluazifop-P-butyl	84.4	69.5	P/P	54 - 133
2340505	Fludioxonil	84.4	68.0	P/P	58 - 127
2340505	Flumioxazin	166	149	P/P	33 - 300
2340505	Flutolanil	85.2	85.4	P/P	42 - 130
2340505	Fluxapyroxad	73.4	57.5	P/P	23 - 141
2340505	Fonofos	85.0	78.0	P/P	58 - 119
2340505	Hexazinone	103	94.2	P/P	68 - 172
2340505	Imazalil	78.8	96.1	P/P	48 - 283
2340505	Iprodione	111	96.6	P/P	38 - 140
2340505	Loratadine	144	131	P/P	50 - 150
2340505	Malathion	95.9	98.8	P/P	40 - 137
2340505	Metolachlor	89.9	93.4	P/P	55 - 122
2340505	Metribuzin	102	110	P/P	38 - 187
2340505	Mevinphos	109	99.0	P/P	54 - 134
2340505	Molinate	82.5	83.2	P/P	41 - 97.0
2340505	Myclobutanil	89.2	81.6	P/P	56 - 125
2340505	Naled	83.4	79.5	P/P	10 - 108
2340505	Napropamide	78.4	65.6	P/P	50 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P416699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340505	Oxadiazon	82.4	71.8	P/P	40 - 119
2340505	Oxyfluorfen	103	83.0	P/P	61 - 153
2340505	Parathion Ethyl	113	102	P/P	59 - 130
2340505	Parathion Methyl	117	110	P/P	65 - 155
2340505	Pendimethalin	103	94.7	P/P	49 - 138
2340505	Phenytol	13.9	11.3	F/F	50 - 200
2340505	Phorate	161	155	P/P	54 - 161
2340505	Prodiamine	39.9	51.4	P/P	33 - 161
2340505	Prometon	92.4	85.9	P/P	48 - 140
2340505	Prometryn	90.0	88.9	P/P	55 - 134
2340505	Pronamide	119	121	P/P	66 - 137
2340505	Propanil	99.2	93.3	P/P	50 - 150
2340505	Propargite	73.8	53.3	P/P	50 - 200
2340505	Propiconazole	105	86.5	P/P	36 - 150
2340505	Pyraflufen Ethyl	106	98.4	P/P	50 - 150
2340505	Pyridaben	119	101	P/P	50 - 200
2340505	Pyriproxyfen	87.8	78.2	P/P	10 - 165
2340505	Stirophos	39.5	37.1	F/F	50 - 150
2340505	Sulfentrazone	107	108	P/P	34 - 140
2340505	Tebuconazole	31.3	18.8	P/P	10 - 127
2340505	Terbufos	113	106	P/P	59 - 138
2340505	Terbuthylazine	92.6	101	P/P	68 - 119
2340505	Thiobencarb	89.7	100	P/P	50 - 150
2340505	Triadimefon	91.7	83.2	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P416474

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340387	Acesulfame K	75.9	76.4	P/P	40 - 150
2340387	AMPA	96.9	97.2	P/P	40 - 150
2340387	Endothall	83.3	81.1	P/P	40 - 150
2340387	Glufosinate	72.7	70.8	P/P	40 - 150
2340387	Glyphosate	84.2	88.5	P/P	40 - 150
2340387	Sucralose	98.5	99.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340387	2,4-D	88.3	84.5	P/P	40 - 150
2340387	2,4,5-T	60.0	67.6	P/P	40 - 150
2340387	Acetaminophen	113	107	P/P	30 - 150
2340387	Acetamiprid	86.8	87.1	P/P	40 - 150
2340387	Afidopyropen	74.5	74.7	P/P	30 - 150
2340387	Bentazon	85.4	84.3	P/P	30 - 150
2340387	Benzovindiflupyr	87.7	89.8	P/P	40 - 150
2340387	Carbamazepine	97.3	97.1	P/P	40 - 150
2340387	Clothianidin	115	119	P/P	40 - 150
2340387	Dinotefuran	139	135	P/P	40 - 150
2340387	Diuron	83.6	69.2	P/P	40 - 150
2340387	Fenuron	90.4	92.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P416544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340387	Fluridone	81.6	88.4	P/P	40 - 150
2340387	Hydrocodone	101	104	P/P	40 - 150
2340387	Ibuprofen	72.6	73.6	P/P	40 - 150
2340387	Imazapyr	92.3	86.0	P/P	40 - 150
2340387	Imidacloprid	146	149	P/P	40 - 150
2340387	Linuron	88.3	91.2	P/P	40 - 150
2340387	Mandestrobin	76.2	80.5	P/P	40 - 150
2340387	MCCP	94.9	80.0	P/P	40 - 150
2340387	Naproxen	74.9	86.2	P/P	40 - 150
2340387	Primidone	101	107	P/P	40 - 150
2340387	Pyraclostrobin	85.9	89.4	P/P	40 - 150
2340387	Silvex	70.9	82.8	P/P	40 - 150
2340387	Thiamethoxam	129	135	P/P	40 - 150
2340387	Tolfenpyrad	49.4	49.6	P/P	30 - 150
2340387	Triclopyr	71.7	80.8	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P417357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340221	Fluoride	103	104	P/F	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P416723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2340375	Organic Carbon	100	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P416500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340474	Color (true)	0.551	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340523	Turbidity	2.19	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340703	Calcium	1.24	Spike	P	0 - 20
2340703	Iron	1.64	Spike	P	0 - 20
2340703	Magnesium	1.06	Spike	P	0 - 20
2340703	Potassium	0.470	Spike	P	0 - 20
2340703	Sodium	0.831	Spike	P	0 - 20
2340703	Strontium	0.676	Spike	P	0 - 20
2340703	Tin	0.586	Spike	P	0 - 20
2340703	Titanium	0.914	Spike	P	0 - 20
2340703	Vanadium	0.936	Spike	P	0 - 20
2340703	Zinc	0.989	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340703	Aluminum	1.59	Spike	P	0 - 20
2340703	Antimony	2.89	Spike	P	0 - 20
2340703	Arsenic	0.715	Spike	P	0 - 20
2340703	Barium	4.89	Spike	P	0 - 20
2340703	Beryllium	1.02	Spike	P	0 - 20
2340703	Boron	2.34	Spike	P	0 - 20
2340703	Cadmium	2.89	Spike	P	0 - 20
2340703	Chromium	1.11	Spike	P	0 - 20
2340703	Cobalt	1.76	Spike	P	0 - 20
2340703	Copper	1.68	Spike	P	0 - 20
2340703	Lead	1.14	Spike	P	0 - 20
2340703	Manganese	1.49	Spike	P	0 - 20
2340703	Molybdenum	0.793	Spike	P	0 - 20
2340703	Nickel	0.995	Spike	P	0 - 20
2340703	Selenium	0.570	Spike	P	0 - 20
2340703	Silver	2.74	Spike	P	0 - 20
2340703	Thallium	0.749	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340509	Chloride	0.303	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340509	Sulfate	0.200	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340500	Ammonia-N	1.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340081	Kjeldahl Nitrogen	2.67	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340476	NO2NO3-N	2.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340467	Total-P	0.513	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P416586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340511	O-Phosphate-P	1.14	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P416699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340505	Acetochlor	4.48	Spike	P	0 - 27
2340505	Alachlor	0.0879	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P416699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340505	Ametryn	1.86	Spike	P	0 - 34
2340505	Atrazine	4.66	Spike	P	0 - 41
2340505	Atrazine Desethyl	2.36	Spike	P	0 - 38
2340505	Azinphos Methyl	0.347	Spike	P	0 - 62
2340505	Azoxystrobin	9.19	Spike	P	0 - 32
2340505	Bromacil	14.7	Spike	P	0 - 30
2340505	Butylate	1.38	Spike	P	0 - 59
2340505	Caffeine	1.99	Spike	P	0 - 60
2340505	Carbophenothion	0.0591	Spike	P	0 - 25
2340505	Carfentrazone Ethyl	11.0	Spike	P	0 - 26
2340505	Chlorfenapyr	7.50	Spike	P	0 - 30
2340505	Chlorpyrifos Ethyl	1.52	Spike	P	0 - 27
2340505	Chlorpyrifos Methyl	2.65	Spike	P	0 - 26
2340505	Coumaphos	20.8	Spike	P	0 - 30
2340505	Cyanazine	0.286	Spike	P	0 - 58
2340505	Cyprodinil	5.69	Spike	P	0 - 30
2340505	Demeton	22.9	Spike	P	0 - 25
2340505	Diazinon	7.74	Spike	P	0 - 29
2340505	Difenoconazole	11.2	Spike	P	0 - 25
2340505	Dimethenamid	5.75	Spike	P	0 - 30
2340505	Dimethomorph	15.2	Spike	P	0 - 30
2340505	Disulfoton	8.46	Spike	P	0 - 33
2340505	Dithiopyr	8.43	Spike	P	0 - 22
2340505	EPTC	5.32	Spike	P	0 - 38
2340505	Ethion	37.9	Spike	P	0 - 79
2340505	Ethoprop	4.50	Spike	P	0 - 23
2340505	Etridiazole	8.29	Spike	P	0 - 30
2340505	Fenamiphos	15.1	Spike	P	0 - 58
2340505	Fenbuconazole	18.8	Spike	P	0 - 37
2340505	Fipronil	6.60	Spike	P	0 - 33
2340505	Fipronil Desulfinyl	4.77	Spike	P	0 - 26
2340505	Fipronil Sulfide	17.4	Spike	P	0 - 37
2340505	Fipronil Sulfone	7.44	Spike	P	0 - 50
2340505	Fluazifop-P-butyl	19.3	Spike	P	0 - 24
2340505	Fludioxonil	21.4	Spike	P	0 - 26
2340505	Flumioxazin	10.4	Spike	P	0 - 37
2340505	Flutolanil	0.234	Spike	P	0 - 26
2340505	Fluxapyroxad	24.3	Spike	P	0 - 34
2340505	Fonofos	8.62	Spike	P	0 - 27
2340505	Hexazinone	8.78	Spike	P	0 - 36
2340505	Imazalil	19.8	Spike	P	0 - 65
2340505	Iprodione	14.2	Spike	P	0 - 33
2340505	Loratadine	8.94	Spike	P	0 - 30
2340505	Malathion	2.90	Spike	P	0 - 44
2340505	Metalaxyl	1.99	Spike	P	0 - 38
2340505	Metolachlor	3.47	Spike	P	0 - 36
2340505	Metribuzin	7.63	Spike	P	0 - 63
2340505	Mevinphos	9.66	Spike	P	0 - 26
2340505	Molinate	0.905	Spike	P	0 - 40
2340505	Myclobutanil	8.93	Spike	P	0 - 21
2340505	Naled	4.75	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P416699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340505	Napropamide	17.7	Spike	P	0 - 30
2340505	Norflurazon	5.74	Spike	P	0 - 24
2340505	Oxadiazon	13.9	Spike	P	0 - 27
2340505	Oxyfluorfen	21.7	Spike	P	0 - 24
2340505	Parathion Ethyl	10.0	Spike	P	0 - 28
2340505	Parathion Methyl	5.67	Spike	P	0 - 27
2340505	Pendimethalin	8.56	Spike	P	0 - 31
2340505	Phenytoin	20.4	Spike	P	0 - 30
2340505	Phorate	3.68	Spike	P	0 - 27
2340505	Prodiamine	25.2	Spike	P	0 - 52
2340505	Prometon	7.23	Spike	P	0 - 31
2340505	Prometryn	1.16	Spike	P	0 - 28
2340505	Pronamide	1.91	Spike	P	0 - 26
2340505	Propanil	6.17	Spike	P	0 - 30
2340505	Propargite	32.3	Spike	F	0 - 30
2340505	Propiconazole	15.4	Spike	P	0 - 31
2340505	Pyraflufen Ethyl	7.84	Spike	P	0 - 30
2340505	Pyridaben	16.3	Spike	P	0 - 30
2340505	Pyriproxyfen	11.5	Spike	P	0 - 50
2340505	Simazine	1.39	Spike	P	0 - 29
2340505	Stiropfos	6.35	Spike	P	0 - 30
2340505	Sulfentrazone	0.607	Spike	P	0 - 33
2340505	Tebuconazole	50.0	Spike	F	0 - 44
2340505	Terbufos	5.92	Spike	P	0 - 29
2340505	Terbuthylazine	8.34	Spike	P	0 - 27
2340505	Thiobencarb	11.1	Spike	P	0 - 30
2340505	Triadimefon	9.73	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P416474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340387	Acesulfame K	0.698	Spike	P	0 - 30
2340387	AMPA	0.270	Spike	P	0 - 30
2340387	Endothall	2.66	Spike	P	0 - 30
2340387	Glufosinate	2.62	Spike	P	0 - 30
2340387	Glyphosate	5.07	Spike	P	0 - 30
2340387	Sucralose	0.509	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P416544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340387	2,4-D	3.08	Spike	P	0 - 30
2340387	2,4,5-T	12.0	Spike	P	0 - 30
2340387	Acetaminophen	5.18	Spike	P	0 - 30
2340387	Acetamiprid	0.388	Spike	P	0 - 30
2340387	Afidopyropen	0.284	Spike	P	0 - 30
2340387	Bentazon	0.830	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P416544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340387	Benzovindiflupyr	2.40	Spike	P	0 - 30
2340387	Carbamazepine	0.259	Spike	P	0 - 30
2340387	Clothianidin	3.83	Spike	P	0 - 30
2340387	Dinotefuran	2.76	Spike	P	0 - 30
2340387	Diuron	18.2	Spike	P	0 - 30
2340387	Fenuron	2.34	Spike	P	0 - 30
2340387	Fluridone	7.92	Spike	P	0 - 30
2340387	Hydrocodone	3.04	Spike	P	0 - 30
2340387	Ibuprofen	1.44	Spike	P	0 - 30
2340387	Imazapyr	7.09	Spike	P	0 - 30
2340387	Imidacloprid	1.69	Spike	P	0 - 30
2340387	Linuron	3.16	Spike	P	0 - 30
2340387	Mandestrobin	5.41	Spike	P	0 - 30
2340387	MCPP	17.0	Spike	P	0 - 30
2340387	Naproxen	14.0	Spike	P	0 - 30
2340387	Primidone	5.65	Spike	P	0 - 30
2340387	Pyraclostrobin	4.02	Spike	P	0 - 30
2340387	Silvex	15.5	Spike	P	0 - 30
2340387	Thiamethoxam	4.54	Spike	P	0 - 30
2340387	Tolfenpyrad	0.481	Spike	P	0 - 30
2340387	Triclopyr	11.9	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P416839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340697	Total Alkalinity	1.00	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P416903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340374	TDS	7.54	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P417357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340221	Fluoride	0.953	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P416723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2340375	Organic Carbon	0.0996	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: 2340503
Field Sample ID: G4SD0218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	78.6	P	30 - 160
EPA 8321B	Endothall-d6	91.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.7	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2340505
Field Sample ID: G4SD0218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	83.3	P	20 - 200
EPA 8270E	Simazine-d10	115	P	71 - 140
EPA 8270E	Terbufos-d10	92.9	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A113443

Included Lab Sample IDs: 2340499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A113445

Included Lab Sample IDs: 2340499

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A113472

Included Lab Sample IDs: 2340501

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

Reference Method: EPA 8321B

Run ID: A113489

Included Lab Sample IDs: 2340503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	117	P/P	60 - 160
Endothall	78.0	93.3	P/P	60 - 160
Glufosinate	95.9	120	P/P	60 - 160
Glyphosate	103	110	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A113497

Included Lab Sample IDs: 2340503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.5	89.9	P/P	60 - 160
Sucralose	102	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A113508

Included Lab Sample IDs: 2340503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.9	100	P/P	50 - 150
2,4,5-T	114	108	P/P	50 - 150
Acetaminophen	96.5	99.0	P/P	60 - 160
Acetamiprid	101	98.0	P/P	50 - 150
Afidopyropen	100	92.2	P/P	50 - 150
Bentazon	128	113	P/P	50 - 160
Benzovindiflupyr	97.5	97.4	P/P	50 - 150
Carbamazepine	105	101	P/P	60 - 150
Clothianidin	94.3	106	P/P	60 - 150
Dinotefuran	99.4	102	P/P	50 - 150
Diuron	86.0	88.1	P/P	60 - 160
Fenuron	100	103	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A113508
Included Lab Sample IDs: 2340503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	112	104	P/P	60 - 160
Hydrocodone	98.4	103	P/P	60 - 150
Ibuprofen	92.6	113	P/P	50 - 160
Imazapyr	97.3	115	P/P	50 - 150
Imidacloprid	99.8	97.3	P/P	60 - 150
Linuron	96.4	97.2	P/P	60 - 150
Mandestrobin	103	103	P/P	50 - 150
MCPP	112	96.1	P/P	50 - 150
Naproxen	139	145	P/P	50 - 160
Primidone	101	99.9	P/P	60 - 150
Pyraclostrobin	104	102	P/P	60 - 150
Silvex	93.3	81.0	P/P	50 - 150
Thiamethoxam	102	101	P/P	50 - 150
Tolfenpyrad	103	103	P/P	60 - 150
Triclopyr	112	99.8	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A113518
Included Lab Sample IDs: 2340504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	97.9	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	99.3	98.0	P/P	90 - 110
Beryllium	101	97.5	P/P	90 - 110
Boron	98.2	95.3	P/P	90 - 110
Cadmium	99.4	99.5	P/P	90 - 110
Chromium	98.4	97.6	P/P	90 - 110
Cobalt	101	99.3	P/P	90 - 110
Copper	97.0	94.9	P/P	90 - 110
Lead	96.4	95.6	P/P	90 - 110
Manganese	100	100	P/P	90 - 110
Molybdenum	99.4	98.2	P/P	90 - 110
Nickel	98.5	97.1	P/P	90 - 110
Selenium	101	98.8	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	98.4	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A113519
Included Lab Sample IDs: 2340504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	94.1	93.7	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A113531
Included Lab Sample IDs: 2340500

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113536

Included Lab Sample IDs: 2340500

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A113542

Included Lab Sample IDs: 2340504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.2	96.0	P/P	90 - 110
Iron	98.0	94.9	P/P	90 - 110
Magnesium	97.1	94.4	P/P	90 - 110
Potassium	99.9	97.6	P/P	90 - 110
Sodium	98.9	97.4	P/P	90 - 110
Strontium	106	103	P/P	90 - 110
Tin	101	97.6	P/P	90 - 110
Titanium	104	99.1	P/P	90 - 110
Vanadium	103	101	P/P	90 - 110
Zinc	101	96.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A113576

Included Lab Sample IDs: 2340499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113582

Included Lab Sample IDs: 2340500

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A113583

Included Lab Sample IDs: 2340500

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113621

Included Lab Sample IDs: 2340500

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	98.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113634

Included Lab Sample IDs: 2340499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report

Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113634

Included Lab Sample IDs: 2340499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	99.9	100	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A113692

Included Lab Sample IDs: 2340505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	103		P	80 - 120
Atrazine	94.3		P	80 - 120
Atrazine Desethyl	94.7		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Azoxystrobin	94.0		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	103		P	80 - 120
Chlorfenapyr	97.6		P	80 - 120
Chlorpyrifos Ethyl	98.6		P	80 - 120
Chlorpyrifos Methyl	103		P	80 - 120
Coumaphos	104		P	80 - 120
Cyanazine	105		P	80 - 120
Cyprodinil	101		P	80 - 120
Demeton	95.9		P	80 - 120
Diazinon	96.5		P	80 - 120
Difenoconazole	108		P	80 - 120
Dimethenamid	104		P	80 - 120
Disulfoton	93.3		P	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	100		P	80 - 120
Ethoprop	100		P	80 - 120
Etridiazole	99.0		P	80 - 120
Fenamiphos	98.2		P	80 - 120
Fenbuconazole	102		P	80 - 120
Fipronil	107		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	97.9		P	80 - 120
Fipronil Sulfone	99.8		P	80 - 120
Fluazifop-P-butyl	98.1		P	80 - 120
Fludioxonil	99.0		P	80 - 120
Flumioxazin	97.2		P	80 - 120
Flutolanil	103		P	80 - 120
Fluxapyroxad	107		P	80 - 120
Fonofos	99.4		P	80 - 120
Hexazinone	96.8		P	80 - 120
Imazalil	101		P	80 - 120
Iprodione	111		P	80 - 120
Malathion	97.9		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	99.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113692
Included Lab Sample IDs: 2340505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metribuzin	99.3		P	80 - 120
Mevinphos	99.2		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	102		P	80 - 120
Naled	117		P	80 - 120
Napropamide	100		P	80 - 120
Oxadiazon	98.7		P	80 - 120
Oxyfluorfen	90.6		P	80 - 120
Parathion Ethyl	105		P	80 - 120
Parathion Methyl	93.7		P	80 - 120
Pendimethalin	91.3		P	80 - 120
Phorate	99.4		P	80 - 120
Prodiamine	91.0		P	80 - 120
Prometon	97.8		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	97.1		P	80 - 120
Propanil	96.7		P	80 - 120
Pyridaben	99.8		P	80 - 120
Pyriproxyfen	101		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	111		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	95.3		P	80 - 120
Terbuthylazine	101		P	80 - 120
Thiobencarb	104		P	80 - 120
Triadimefon	111		P	80 - 120

Reference Method: EPA 8270E
Run ID: A113716
Included Lab Sample IDs: 2340505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	98.7		P	80 - 120
Carfentrazone Ethyl	98.8		P	80 - 120
Dimethomorph	91.3		P	80 - 120
Ethion	98.6		P	80 - 120
Loratadine	95.0		P	80 - 120
Norflurazon	93.4		P	80 - 120
Phenytoin	100		P	80 - 120
Propargite	102		P	80 - 120
Propiconazole	101		P	80 - 120
Pyraflufen Ethyl	101		P	80 - 120
Stirophos	98.0		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A113778
Included Lab Sample IDs: 2340499

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	101	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)	99.1				0.551	
EPA 180.1 Rev. 2.0	Turbidity	95.3				2.19	
EPA 200.7 Rev. 4.4	Calcium	100	98.9	96.4			1.24
	Iron	101	102	99.9	98.3		1.64
	Magnesium	99.3	103	98.6	96.8		1.06
	Potassium	104	101	98.9	99.4		0.470
	Sodium	103	101	103	101		0.831
	Strontium	106	107	104	104		0.676
	Tin	99.9	99.3	96.3	95.8		0.586
	Titanium	104	106	101	100		0.914
	Vanadium	103	105	101	100		0.936
	Zinc	99.1	101	95.1	94.2		0.989
EPA 200.8 Rev. 5.4	Aluminum	104	100	103	102		1.59
	Antimony	105	104	107	104		2.89
	Arsenic	101	99.4	99.3	98.6		0.715
	Barium	97.6	99.1	104	98.2		4.89
	Beryllium	95.3	98.0	93.4	92.5		1.02
	Boron	103	98.0	108	105		2.34
	Cadmium	99.4	99.2	103	100		2.89
	Chromium	102	98.3	102	100		1.11
	Cobalt	103	99.3	101	99.5		1.76
	Copper	97.9	95.2	93.9	92.3		1.68
	Lead	99.5	98.3	100	99.0		1.14
	Manganese	104	100	104	102		1.49
	Molybdenum	101	99.1	103	102		0.793
	Nickel	101	97.2	98.4	97.4		0.995
	Selenium	102	99.8	97.0	97.6		0.570
	Silver	104	99.4	104	101		2.74
	Thallium	102	101	104	103		0.749
EPA 300.0 Rev. 2.1	Chloride	101	99.1	97.0		0.303	
	Sulfate	100	96.1	96.5		0.200	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	97.4	98.6			1.13
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	98.7	103			2.67
EPA 353.2 Rev. 2.0	NO2NO3-N	102	99.2	102			2.52
EPA 365.1 Rev. 2.0	Total-P	104	104	104			0.513
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	97.3	98.5			1.14
EPA 8270E	Acetochlor	95.7	102	107			4.48
	Alachlor	95.5	91.8	91.7			0.0879
	Ametryn	88.4	82.3	80.5			1.86
	Atrazine	91.4					4.66
	Atrazine Desethyl	57.2	60.9	62.6			2.36
	Azinphos Methyl	121	142	142			0.347
	Azoxystrobin	98.1	142	127			9.19
	Bromacil	94.2	82.7	98.9			14.7
	Butylate	58.7	59.9	60.8			1.38
	Caffeine	74.4	75.3	76.8			1.99
	Carbophenothion	92.4	82.5	82.4			0.0591
	Carfentrazone Ethyl	137	123	110			11.0
	Chlorfenapyr	87.0	64.1	59.5			7.50
	Chlorpyrifos Ethyl	93.1	67.2	68.2			1.52
	Chlorpyrifos Methyl	94.6	83.5	81.3			2.65
	Coumaphos	124	100	81.3			20.8
	Cyanazine	85.6	85.9	85.7			0.286
	Cyprodinil	94.8	94.9	89.6			5.69

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Demeton	73.7	97.2	77.2			22.9
	Diazinon	100	111	119			7.74
	Difenoconazole	161	160	143			11.2
	Dimethenamid	80.7	87.0	82.1			5.75
	Dimethomorph	92.0	154	132			15.2
	Disulfoton	88.7	91.8	84.3			8.46
	Dithiopyr	98.0	99.7	90.9			8.43
	EPTC	48.7	54.6	57.6			5.32
	Ethion	103	50.7	34.5			37.9
	Ethoprop	80.4	104	99.1			4.50
	Etridiazole	51.2	70.7	76.8			8.29
	Fenamiphos	93.5	59.3	51.0			15.1
	Fenbuconazole	128	109	88.5			18.8
	Fipronil	96.8	97.0	90.8			6.60
	Fipronil Desulfinyl	96.5	96.4	91.9			4.77
	Fipronil Sulfide	83.4	59.3	49.8			17.4
	Fipronil Sulfone	93.7	79.1	73.4			7.44
	Fluazifop-P-butyl	102	84.4	69.5			19.3
	Fludioxonil	94.8	84.4	68.0			21.4
	Flumioxazin	153	166	149			10.4
	Flutolanil	99.9	85.2	85.4			0.234
	Fluxapyroxad	101	73.4	57.5			24.3
	Fonofos	84.3	85.0	78.0			8.62
	Hexazinone	103	103	94.2			8.78
	Imazalil	80.3	78.8	96.1			19.8
	Iprodione	134	111	96.6			14.2
	Loratadine	162	144	131			8.94
	Malathion	104	95.9	98.8			2.90
	Metalaxyl	92.5					1.99
	Metolachlor	89.9	89.9	93.4			3.47
	Metribuzin	94.7	102	110			7.63
	Mevinphos	64.9	109	99.0			9.66
	Molinate	68.1	82.5	83.2			0.905
	Myclobutanil	100	89.2	81.6			8.93
	Naled	82.8	83.4	79.5			4.75
	Napropamide	85.1	78.4	65.6			17.7
	Norflurazon	105					5.74
	Oxadiazon	85.7	82.4	71.8			13.9
	Oxyfluorfen	114	103	83.0			21.7
	Parathion Ethyl	101	113	102			10.0
	Parathion Methyl	102	117	110			5.67
	Pendimethalin	105	103	94.7			8.56
	Phenytoin	42.7	13.9	11.3			20.4
	Phorate	80.3	161	155			3.68
	Prodiamine	77.3	39.9	51.4			25.2
	Prometon	82.8	92.4	85.9			7.23
	Prometryn	94.4	90.0	88.9			1.16
	Pronamide	92.8	119	121			1.91
	Propanil	92.4	99.2	93.3			6.17
	Propargite	123	73.8	53.3			32.3
	Propiconazole	65.3	105	86.5			15.4
	Pyraflufen Ethyl	121	106	98.4			7.84
	Pyridaben	126	119	101			16.3
	Pyriproxyfen	122	87.8	78.2			11.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Simazine	91.8				1.39
	Stirophos	98.0	39.5	37.1		6.35
	Sulfentrazone	115	107	108		0.607
	Tebuconazole	97.6	31.3	18.8		50.0
	Terbufos	102	113	106		5.92
	Terbutylazine	93.6	92.6	101		8.34
	Thiobencarb	89.4	89.7	100		11.1
	Triadimefon	95.6	91.7	83.2		9.73
EPA 8321B	2,4-D	77.5	88.3	84.5		3.08
	2,4,5-T	71.2	60.0	67.6		12.0
	Acesulfame K	88.1	75.9	76.4		0.698
	Acetaminophen	93.5	113	107		5.18
	Acetamiprid	85.0	86.8	87.1		0.388
	Afidopyropen	60.7	74.5	74.7		0.284
	AMPA	113	96.9	97.2		0.270
	Bentazon	97.0	85.4	84.3		0.830
	Benzovindiflupyr	90.0	87.7	89.8		2.40
	Carbamazepine	93.0	97.3	97.1		0.259
	Clothianidin	100	115	119		3.83
	Dinotefuran	104	139	135		2.76
	Diuron	84.7	83.6	69.2		18.2
	Endothall	80.3	83.3	81.1		2.66
	Fenuron	107	90.4	92.5		2.34
	Fluridone	99.3	81.6	88.4		7.92
	Glufosinate	111	72.7	70.8		2.62
	Glyphosate	108	84.2	88.5		5.07
	Hydrocodone	97.9	101	104		3.04
	Ibuprofen	82.0	72.6	73.6		1.44
	Imazapyr	94.2	92.3	86.0		7.09
	Imidacloprid	110	146	149		1.69
	Linuron	104	88.3	91.2		3.16
	Mandestrobin	89.0	76.2	80.5		5.41
	MCPP	83.2	94.9	80.0		17.0
	Naproxen	64.4	74.9	86.2		14.0
	Primidone	101	101	107		5.65
	Pyraclostrobin	81.3	85.9	89.4		4.02
	Silvex	67.7	70.9	82.8		15.5
	Sucralose	105	98.5	99.2		0.509
	Thiamethoxam	99.6	129	135		4.54
	Tolfenpyrad	44.7	49.4	49.6		0.481
	Triclopyr	77.4	71.7	80.8		11.9
SM 2320 B-2011	Total Alkalinity	99.5			1.00	
SM 2540 C-2011	TDS				7.54	
SM 4500-F- C-2011	Fluoride	103	103	104		0.953
SM 5310 B-2011	Organic Carbon	98.3	100	100		0.0996

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2340499
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2340499
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2340504

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	2340504
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2340499
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2340499
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2340500
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2340500
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2340500
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2340500
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2340501
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2340505
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2340503
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2340499
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2340504
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2340499
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2340499
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2340499
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2340500

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/12/2022			07/12/2022 15:53	Samantha L Bates	2340499
EPA 180.1 Rev. 2.0	07/12/2022			07/12/2022 14:16	Khloe J Berg	2340499
EPA 200.7 Rev. 4.4	07/12/2022	07/14/2022 09:59	Mackenzie Hunt	07/15/2022 21:18	McKinley C Carter	2340504
EPA 200.8 Rev. 5.4	07/12/2022	07/14/2022 09:59	Mackenzie Hunt	07/14/2022 16:44	Megan Whitefoot	2340504
	07/12/2022	07/14/2022 09:59	Mackenzie Hunt	07/15/2022 04:42	Emily M Philpot	2340504
EPA 300.0 Rev. 2.1	07/12/2022			07/20/2022 00:57	Anna M. Plaviak	2340499
EPA 350.1 Rev. 2.0	07/12/2022			07/20/2022 14:23	Ping Hua	2340500
EPA 351.2 Rev. 2.0	07/12/2022	07/18/2022 16:27	Samantha L Bates	07/19/2022 11:51	Alexandra J Mattheus	2340500
EPA 353.2 Rev. 2.0	07/12/2022			07/15/2022 12:15	Judith K. Clark	2340500
EPA 365.1 Rev. 2.0	07/12/2022	07/18/2022 14:52	Adam P Silver	07/19/2022 13:33	James L Waggeberby	2340500
EPA 365.1 Rev. 2.0 dissolved	07/12/2022			07/13/2022 12:47	Chandler E Cox	2340501
EPA 8270E	07/12/2022	07/14/2022 08:00	Rasheda Ghaffari	07/17/2022 19:34	Michael Poppell	2340505
	07/12/2022	07/14/2022 08:00	Rasheda Ghaffari	07/26/2022 18:48	Michael Poppell	2340505
EPA 8321B	07/12/2022	07/13/2022 11:00	Umesh Chiluwal	07/13/2022 13:44	Umesh Chiluwal	2340503
	07/12/2022	07/13/2022 11:00	Umesh Chiluwal	07/14/2022 00:27	Umesh Chiluwal	2340503
	07/12/2022	07/14/2022 09:00	June Rhew	07/14/2022 17:08	Juyoung Kim	2340503
SM 2320 B-2011	07/12/2022			07/15/2022 06:08	Dale L. Simmons	2340499
SM 2340 B-2011	07/12/2022			07/15/2022 21:18	McKinley C Carter	2340504
SM 2540 C-2011	07/12/2022			07/13/2022 16:09	Yijie Li	2340499
SM 2540 D-2011	07/12/2022			07/13/2022 16:09	Yijie Li	2340499
SM 4500-F- C-2011	07/12/2022			07/29/2022 06:14	Dale L. Simmons	2340499
SM 5310 B-2011	07/12/2022			07/14/2022 21:52	Khloe J Berg	2340500