

Chemical Analysis Report

CEN-DIST-2022-05-24-01

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

Event Description: **Lake Irma LVI**
Request ID: **RQ-2022-05-23-19**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 15-JUN-2022 09:52



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 Irma @ Center

Collection Date/Time: 05/23/2022 12:15

Field ID: G2CE0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329409	DEP SOP: NU-094-1	Color (true)**	23	A	PCU	P414321	
	EPA 180.1 Rev. 2.0	Turbidity	0.70	I	NTU	P414319	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P414632	
		Sulfate	6.2	A	mg SO4/L	P414635	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P414623	
	SM 2540 C-2011	TDS	79		mg/L	P414656	
	SM 2540 D-2011	TSS	2	U	mg/L	P414659	
	SM 4500-F- C-2011	Fluoride	0.052	I	mg F/L	P414624	
2329410	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P415121	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P414367	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414819	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P414408	
	SM 5310 B-2011	Organic Carbon	6.8		mg C/L	P414512	
2329411	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P414310	
2329414	EPA 8321B	2,4-D	0.0091		ug/L	P414328	
		Acesulfame K	0.10	U	ug/L	P414386	
		2,4,5-T	0.0040	U	ug/L	P414328	
		AMPA	0.10	U	ug/L	P414386	
		Acetaminophen	0.0080	U	ug/L	P414328	
		Acetamiprid	0.0020	U	ug/L	P414328	
		Endothall	0.25	U	ug/L	P414386	
		Glufosinate	0.10	U	ug/L	P414386	
		Glyphosate	0.13	I	ug/L	P414386	
		Afidopyropen	0.0020	U	ug/L	P414328	
		Bentazon	0.030		ug/L	P414328	
		Sucralose	0.32		ug/L	P414386	
		Benzovindiflupyr	0.0020	U	ug/L	P414328	
		Carbamazepine	0.0024	I	ug/L	P414328	
		Clothianidin	0.0020	U	ug/L	P414328	
		Dinotefuran	0.0020	U	ug/L	P414328	
		Diuron	0.0034	I	ug/L	P414328	
		Fenuron	0.032	U	ug/L	P414328	
		Fluridone	0.016		ug/L	P414328	
		Imazapyr	0.019		ug/L	P414328	
		Hydrocodone	0.0020	U	ug/L	P414328	
		Ibuprofen	0.020	U	ug/L	P414328	
		Imidacloprid	0.0020	U	ug/L	P414328	MS
		Linuron	0.0040	U	ug/L	P414328	
		Mandestrobin	0.0020	U	ug/L	P414328	
		MCPP	0.0040	U	ug/L	P414328	
		Naproxen	0.0080	U	ug/L	P414328	
		Primidone	0.0040	U	ug/L	P414328	
		Pyraclostrobin	0.0020	U	ug/L	P414328	

Field ID: G2CE0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329414	EPA 8321B	Silvex	0.0040	U	ug/L	P414328	
		Thiamethoxam	0.0020	U	ug/L	P414328	
		Tolfenpyrad	0.0020	U	ug/L	P414328	
		Triclopyr	0.0040	U	ug/L	P414328	
2329418	EPA 200.7 Rev. 4.4	Calcium	13.6		mg/L	P414396	
		Iron	37	I	ug/L	P414396	
		Magnesium	2.18		mg/L	P414396	
		Potassium	1.3		mg/L	P414396	
		Sodium	12.6		mg/L	P414396	
		Strontium	48.1		ug/L	P414396	
		Tin	3.0	U	ug/L	P414396	
		Titanium	0.75	U	ug/L	P414396	
		Vanadium	2.0	U	ug/L	P414396	
		Zinc	5.0	U	ug/L	P414396	
	EPA 200.8 Rev. 5.4	Aluminum	29		ug/L	P414396	
		Antimony	0.20	I	ug/L	P414396	
		Arsenic	1.62		ug/L	P414396	
		Barium	7.24		ug/L	P414396	
		Beryllium	0.010	U	ug/L	P414396	
		Boron**	32.1		ug/L	P414396	
		Cadmium	0.020	U	ug/L	P414396	
		Chromium	0.40	U	ug/L	P414396	
		Cobalt	0.021	I	ug/L	P414396	
		Copper	0.96		ug/L	P414396	
		Lead	0.20	U	ug/L	P414396	
		Manganese	1.80		ug/L	P414396	
		Molybdenum	0.32	I	ug/L	P414396	
		Nickel	0.50	U	ug/L	P414396	
		Selenium	0.20	U	ug/L	P414396	
		Silver	0.010	U	ug/L	P414396	
		Thallium	0.10	U	ug/L	P414396	
		Hardness	42.9		mg/L	P414396	
2329419	SM 2340 B-2011	Oxybenzone**	9.6	U	ng/L	P414288	MS, RPD
	EPA 8270E	Acetochlor	0.24	U	ng/L	P414288	
		Octinoxate**	19	U	ng/L	P414288	
		Alachlor	0.24	U	ng/L	P414288	
		Avobenzone**	96	U	ng/L	P414288	
		Ametryn	0.58	U	ng/L	P414288	
		Atrazine	63		ng/L	P414288	
		Atrazine Desethyl	12		ng/L	P414288	
		Azinphos Methyl	1.9	U	ng/L	P414288	
		Azoxystrobin**	0.48	U	ng/L	P414288	
		Bromacil	0.48	U	ng/L	P414288	
		Butylate	0.38	U	ng/L	P414288	
		Caffeine**	7.3	I	ng/L	P414288	

Field ID: G2CE0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329419	EPA 8270E	Carbophenothion	2.4	U	ng/L	P414288	
		Carfentrazone Ethyl**	0.096	U	ng/L	P414288	
		Chlorfenapyr**	0.17	U	ng/L	P414288	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P414288	
		Chlorpyrifos Methyl	0.048	U	ng/L	P414288	
		Coumaphos**	0.48	U	ng/L	P414288	
		Cyanazine	3.1	U	ng/L	P414288	
		Cyprodinil**	0.096	U	ng/L	P414288	
		Demeton	1.4	U	ng/L	P414288	
		Diazinon	0.12	U	ng/L	P414288	
		Difenoconazole**	0.58	U	ng/L	P414288	
		Dimethenamid**	0.096	UJ	ng/L	P414288	LCS
		Dimethomorph**	0.17	U	ng/L	P414288	MS, RPD
		Disulfoton	0.48	U	ng/L	P414288	
		Dithiopyr**	0.17	U	ng/L	P414288	
		EPTC	1.2	U	ng/L	P414288	
		Ethion	0.14	U	ng/L	P414288	
		Ethoprop	0.096	U	ng/L	P414288	
		Etridiazole**	0.14	U	ng/L	P414288	
		Fenamiphos	0.48	U	ng/L	P414288	
		Fenbuconazole**	0.12	U	ng/L	P414288	
		Fipronil	0.24	U	ng/L	P414288	
		Fipronil Desulfinyl**	0.77		ng/L	P414288	
		Fipronil Sulfide	0.35	I	ng/L	P414288	
		Fipronil Sulfone	0.78		ng/L	P414288	
		Fluazifop-P-butyl**	0.096	U	ng/L	P414288	
		Fludioxonil**	0.12	U	ng/L	P414288	
		Flumioxazin**	1.7	U	ng/L	P414288	
		Flutolanil**	0.096	U	ng/L	P414288	
		Fluxapyroxad**	0.096	U	ng/L	P414288	
		Fonofos	0.19	U	ng/L	P414288	
		Hexazinone	0.48	U	ng/L	P414288	
		Imazalil**	0.72	U	ng/L	P414288	
		Iprodione**	0.58	U	ng/L	P414288	
		Loratadine**	0.096	U	ng/L	P414288	
		Malathion	0.34	U	ng/L	P414288	
		Metalaxyl	0.72	U	ng/L	P414288	
		Metolachlor	0.44	I	ng/L	P414288	
		Metribuzin	2.4	U	ng/L	P414288	
		Mevinphos	1.0	U	ng/L	P414288	
		Molinate	0.29	U	ng/L	P414288	
		Myclobutanil**	0.24	U	ng/L	P414288	
		Naled**	1.4	U	ng/L	P414288	
		Napropamide**	0.38	UJ	ng/L	P414288	LCS
		Norflurazon	0.48	U	ng/L	P414288	

Field ID: G2CE0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329419	EPA 8270E	Oxadiazon	0.30	I	ng/L	P414288	
		Oxyfluorfen**	0.14	U	ng/L	P414288	
		Parathion Ethyl	0.24	U	ng/L	P414288	
		Parathion Methyl	0.53	U	ng/L	P414288	
		Pendimethalin	0.96	U	ng/L	P414288	
		Phenytol**	3.4	U	ng/L	P414288	
		Phorate	0.50	U	ng/L	P414288	
		Prodiamine**	0.29	U	ng/L	P414288	
		Prometon	2.6	I	ng/L	P414288	
		Prometryn	0.19	U	ng/L	P414288	
		Pronamide**	0.14	U	ng/L	P414288	
		Propanil**	0.12	U	ng/L	P414288	
		Propargite**	1.4	U	ng/L	P414288	
		Propiconazole**	1.9		ng/L	P414288	
		Pyraflufen Ethyl**	0.24	U	ng/L	P414288	
		Pyridaben**	0.43	U	ng/L	P414288	
		Pyriproxyfen**	0.12	U	ng/L	P414288	
		Simazine	2.3		ng/L	P414288	
		Stirophos**	0.12	U	ng/L	P414288	
		Sulfentrazone**	0.54	I	ng/L	P414288	
		Tebuconazole**	1.8	I	ng/L	P414288	
		Terbufos	0.096	U	ng/L	P414288	
		Terbutylazine	0.41	U	ng/L	P414288	
		Thiobencarb**	0.58	U	ng/L	P414288	
		Triadimefon**	0.24	U	ng/L	P414288	

Ref. Method and Comment:

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

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P414321

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414319

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414396

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: P414396

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: P414632

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: P414635

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415121

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414367

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414819

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414408

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414310

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

Reference Method: EPA 8270E
Batch ID: P414288

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
Avobenzone	100	U	ng/L
Avobenzone	100	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

Component	Result	Code	Units
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	2.5	U	ng/L
Carbophenothion	2.5	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

Component	Result	Code	Units
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
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
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	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: P414288

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	0.30	U	ng/L
Prodiamine	0.30	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: P414328

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P414328

Component	Result	Code	Units
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P414386

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

Reference Method: SM 2320 B-2011

Batch ID: P414623

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

Reference Method: SM 2540 C-2011

Batch ID: P414656

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P414659

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P414624

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414512

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: P414321

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: P414319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.6		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	107		P	85 - 115
Magnesium	110		P	85 - 115
Potassium	105		P	85 - 115
Sodium	103		P	85 - 115
Strontium	93.9		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	95.2		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P414396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.9		P	85 - 115
Antimony	96.8		P	85 - 115
Arsenic	97.7		P	85 - 115
Barium	99.4		P	85 - 115
Beryllium	95.3		P	85 - 115
Boron	103		P	85 - 115
Cadmium	94.7		P	85 - 115
Chromium	95.7		P	85 - 115
Cobalt	96.9		P	85 - 115
Copper	96.2		P	85 - 115
Lead	97.8		P	85 - 115
Manganese	96.4		P	85 - 115
Molybdenum	96.2		P	85 - 115
Nickel	97.6		P	85 - 115
Selenium	96.7		P	85 - 115
Silver	97.2		P	85 - 115
Thallium	98.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414632

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414367

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414819

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: P414408

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.2		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	80.9		P	70 - 121
Alachlor	81.7		P	68 - 119
Ametryn	93.2		P	64 - 139
Atrazine	80.7		P	76 - 120
Atrazine Desethyl	70.2		P	44 - 126
Avobenzone	97.6		P	76 - 212
Azinphos Methyl	102		P	43 - 192
Azoxystrobin	120		P	36 - 224
Bromacil	65.8		P	52 - 121
Butylate	52.0		P	28 - 91.0
Caffeine	72.0		P	50 - 134
Carbophenothion	74.6		P	56 - 129
Carfentrazone Ethyl	92.2		P	60 - 141
Chlorfenapyr	71.5		P	56 - 115
Chlorpyrifos Ethyl	78.8		P	60 - 118
Chlorpyrifos Methyl	83.3		P	68 - 119
Coumaphos	58.7		P	18 - 250
Cyanazine	73.6		P	61 - 250
Cyprodinil	95.7		P	55 - 145
Demeton	68.5		P	30 - 159
Diazinon	97.6		P	70 - 123
Difenoconazole	168		P	49 - 204

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dimethenamid	59.1		F	64 - 115
Dimethomorph	126		P	12 - 219
Disulfoton	93.4		P	44 - 125
Dithiopyr	75.8		P	64 - 115
EPTC	53.4		P	28 - 86.0
Ethion	57.3		P	33 - 125
Ethoprop	98.2		P	64 - 116
Etridiazole	60.6		P	34 - 91.0
Fenamiphos	62.4		P	12 - 127
Fenbuconazole	76.1		P	59 - 151
Fipronil	82.2		P	67 - 129
Fipronil Desulfinyl	81.5		P	65 - 127
Fipronil Sulfide	76.9		P	61 - 116
Fipronil Sulfone	75.3		P	55 - 117
Fluazifop-P-butyl	89.4		P	62 - 127
Fludioxonil	63.1		P	62 - 128
Flumioxazin	51.0		P	33 - 250
Flutolanil	63.8		P	56 - 127
Fluxapyroxad	119		P	45 - 128
Fonofos	89.8		P	62 - 111
Hexazinone	69.1		P	46 - 139
Imazalil	63.2		P	38 - 142
Iprodione	73.5		P	47 - 135
Loratadine	143		P	10 - 244
Malathion	80.0		P	61 - 139
Metalaxyl	76.4		P	10 - 119
Metolachlor	74.5		P	65 - 118
Metribuzin	106		P	51 - 250
Mevinphos	85.5		P	53 - 121
Molinate	64.8		P	42 - 96.0
Myclobutanil	58.2		P	55 - 128
Naled	82.8		P	10 - 98.0
Napropamide	41.9		F	49 - 121
Norflurazon	64.3		P	61 - 126
Octinoxate	61.6		P	30 - 159
Oxadiazon	70.1		P	59 - 116
Oxybenzone	69.5		P	61 - 139
Oxyfluorfen	73.5		P	64 - 137
Parathion Ethyl	90.9		P	70 - 112
Parathion Methyl	116		P	76 - 133
Pendimethalin	85.8		P	52 - 117
Phenytoin	20.3		P	10 - 199
Phorate	82.0		P	48 - 121
Prodiamine	49.6		P	26 - 142
Prometon	69.1		P	43 - 123
Prometryn	88.5		P	66 - 127
Pronamide	89.1		P	75 - 121
Propanil	84.6		P	45 - 150
Propargite	100		P	42 - 208
Propiconazole	76.0		P	60 - 125
Pyraflufen Ethyl	112		P	70 - 138
Pyridaben	69.2		P	35 - 245

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyriproxyfen	38.4		P	30 - 149
Simazine	81.5		P	72 - 125
Stirophos	64.3		P	29 - 164
Sulfentrazone	52.8		P	21 - 139
Tebuconazole	20.7		P	10 - 115
Terbufos	115		P	60 - 123
Terbutylazine	83.3		P	72 - 115
Thiobencarb	72.7		P	31 - 139
Triadimefon	66.5		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P414328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.1		P	40 - 150
2,4,5-T	74.9		P	40 - 150
Acetaminophen	68.4		P	30 - 150
Acetamiprid	88.6		P	40 - 150
Afidopyropen	71.8		P	30 - 150
Bentazon	119		P	30 - 150
Benzovindiflupyr	90.1		P	40 - 150
Carbamazepine	102		P	40 - 150
Clothianidin	98.0		P	40 - 150
Dinotefuran	99.6		P	40 - 150
Diuron	89.1		P	40 - 150
Fenuron	106		P	40 - 150
Fluridone	83.0		P	40 - 150
Hydrocodone	90.1		P	40 - 150
Ibuprofen	78.0		P	40 - 150
Imazapyr	99.4		P	40 - 150
Imidacloprid	96.6		P	40 - 150
Linuron	71.1		P	40 - 150
Mandestrobin	83.0		P	40 - 150
MCPP	119		P	40 - 150
Naproxen	76.0		P	40 - 150
Primidone	94.7		P	40 - 150
Pyraclostrobin	94.8		P	40 - 150
Silvex	75.0		P	40 - 150
Thiamethoxam	94.5		P	40 - 150
Tolfenpyrad	55.0		P	30 - 150
Triclopyr	88.1		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414386

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	129		P	40 - 150
AMPA	97.7		P	40 - 150
Endothall	95.8		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	95.2		P	40 - 150
Sucralose	95.3		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P414623

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.1		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P414624

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414512

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P414396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329260	Calcium	103		P	80 - 120
2329260	Iron	108	108	P/P	80 - 120
2329260	Magnesium	111	109	P/P	80 - 120
2329260	Potassium	102	102	P/P	80 - 120
2329260	Sodium	102		P	80 - 120
2329260	Strontium	94.1	99.4	P/P	80 - 120
2329260	Tin	101	103	P/P	80 - 120
2329260	Titanium	103	104	P/P	80 - 120
2329260	Vanadium	98.4	99.6	P/P	80 - 120
2329260	Zinc	102	104	P/P	80 - 120
2330030	Calcium	104		P	80 - 120
2330030	Iron	111		P	80 - 120
2330030	Magnesium	114		P	80 - 120
2330030	Potassium	105		P	80 - 120
2330030	Sodium	110		P	80 - 120
2330030	Strontium	111		P	80 - 120
2330030	Tin	104		P	80 - 120
2330030	Titanium	104		P	80 - 120
2330030	Vanadium	99.7		P	80 - 120
2330030	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P414396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329260	Aluminum	102	102	P/P	80 - 120
2329260	Antimony	101	101	P/P	80 - 120
2329260	Arsenic	100	99.7	P/P	80 - 120
2329260	Barium	103	102	P/P	80 - 120
2329260	Beryllium	86.1	98.1	P/P	80 - 120
2329260	Boron	107	107	P/P	80 - 120
2329260	Cadmium	100	97.9	P/P	80 - 120
2329260	Chromium	100	98.9	P/P	80 - 120
2329260	Cobalt	99.4	97.8	P/P	80 - 120
2329260	Copper	99.6	98.9	P/P	80 - 120
2329260	Lead	102	102	P/P	80 - 120
2329260	Manganese	101	98.5	P/P	80 - 120
2329260	Molybdenum	103	101	P/P	80 - 120
2329260	Nickel	99.1	98.5	P/P	80 - 120
2329260	Selenium	96.4	98.5	P/P	80 - 120
2329260	Silver	99.0	97.4	P/P	80 - 120
2329260	Thallium	104	107	P/P	80 - 120
2330030	Aluminum	103		P	80 - 120
2330030	Antimony	99.4		P	80 - 120
2330030	Arsenic	99.6		P	80 - 120
2330030	Barium	103		P	80 - 120
2330030	Beryllium	93.3		P	80 - 120
2330030	Boron	104		P	80 - 120
2330030	Cadmium	99.5		P	80 - 120
2330030	Chromium	98.0		P	80 - 120
2330030	Cobalt	98.3		P	80 - 120
2330030	Copper	98.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P414396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330030	Lead	101		P	80 - 120
2330030	Manganese	104		P	80 - 120
2330030	Molybdenum	101		P	80 - 120
2330030	Nickel	99.8		P	80 - 120
2330030	Selenium	96.7		P	80 - 120
2330030	Silver	98.4		P	80 - 120
2330030	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329409	Chloride	95.6		P	90 - 110
2329911	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329409	Sulfate	96.1		P	90 - 110
2329911	Sulfate	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329410	Ammonia-N	96.6	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P414367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329254	Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P414819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329353	NO2NO3-N	105	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329410	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P414310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329411	O-Phosphate-P	96.9	97.5	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328713	Acetochlor	90.1	75.0	P/P	65 - 124
2328713	Alachlor	82.1	72.1	P/P	61 - 121
2328713	Ametryn	102	99.9	P/P	52 - 216
2328713	Atrazine Desethyl	63.9	56.4	P/P	15 - 160
2328713	Avobenzone	108	110	P/P	59 - 206
2328713	Azinphos Methyl	126	104	P/P	40 - 292
2328713	Azoxystrobin	116	108	P/P	12 - 242
2328713	Bromacil	82.3	71.8	P/P	54 - 167
2328713	Butylate	49.9	41.5	P/P	14 - 94.0
2328713	Caffeine	98.3	95.6	P/P	10 - 226
2328713	Carbophenothion	77.4	66.8	P/P	49 - 122
2328713	Carfentrazone Ethyl	95.0	86.7	P/P	53 - 138
2328713	Chlorfenapyr	73.9	77.8	P/P	50 - 150
2328713	Chlorpyrifos Ethyl	68.9	69.0	P/P	52 - 122
2328713	Chlorpyrifos Methyl	88.2	79.6	P/P	66 - 117
2328713	Coumaphos	74.3	71.9	P/P	50 - 220
2328713	Cyanazine	81.0	68.7	P/P	43 - 245
2328713	Cyprodinil	100	83.2	P/P	50 - 150
2328713	Demeton	111	92.5	P/P	43 - 188
2328713	Diazinon	100	85.5	P/P	69 - 131
2328713	Difenoconazole	102	92.5	P/P	34 - 231
2328713	Dimethenamid	67.5	61.0	P/P	55 - 118
2328713	Dimethomorph	88.7	46.6	P/F	50 - 150
2328713	Disulfoton	84.4	82.2	P/P	38 - 141
2328713	Dithiopyr	71.1	64.2	P/P	42 - 116
2328713	EPTC	44.4	40.5	P/P	18 - 85.0
2328713	Ethion	55.3	51.7	P/P	10 - 131
2328713	Ethoprop	101	88.9	P/P	65 - 129
2328713	Etridiazole	60.3	53.6	P/P	50 - 150
2328713	Fenamiphos	86.1	88.5	P/P	31 - 137
2328713	Fenbuconazole	84.8	74.5	P/P	57 - 160
2328713	Fipronil	89.2	76.4	P/P	62 - 132
2328713	Fipronil Desulfinyl	98.8	83.1	P/P	57 - 131
2328713	Fipronil Sulfide	78.0	69.3	P/P	15 - 138
2328713	Fipronil Sulfone	69.9	56.1	P/P	21 - 134
2328713	Fluazifop-P-butyl	84.2	74.4	P/P	54 - 133
2328713	Fludioxonil	76.8	67.1	P/P	58 - 127
2328713	Flumioxazin	109	98.1	P/P	33 - 300
2328713	Flutolanil	73.6	72.9	P/P	42 - 130
2328713	Fluxapyroxad	64.0	56.0	P/P	23 - 141
2328713	Fonofos	86.0	79.4	P/P	58 - 119
2328713	Hexazinone	82.7	78.5	P/P	68 - 172
2328713	Imazalil	94.1	91.6	P/P	48 - 283
2328713	Iprodione	81.7	68.4	P/P	38 - 140
2328713	Loratadine	87.2	95.1	P/P	50 - 150
2328713	Malathion	79.9	78.7	P/P	40 - 137
2328713	Metalaxyl	80.2	66.8	P/P	21 - 129
2328713	Metolachlor	72.2	64.6	P/P	55 - 122
2328713	Metribuzin	98.5	93.8	P/P	38 - 187
2328713	Mevinphos	105	91.8	P/P	54 - 134
2328713	Molinate	64.7	62.0	P/P	41 - 97.0
2328713	Myclobutanil	86.2	75.9	P/P	56 - 125

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328713	Naled	87.8	81.3	P/P	10 - 108
2328713	Napropamide	64.8	56.8	P/P	50 - 150
2328713	Norflurazon	76.3	65.1	P/P	32 - 122
2328713	Octinoxate	42.3	52.7	P/P	25 - 150
2328713	Oxadiazon	71.4	65.1	P/P	40 - 119
2328713	Oxybenzone	53.6	157	F/F	59 - 147
2328713	Oxyfluorfen	101	88.6	P/P	61 - 153
2328713	Parathion Ethyl	87.1	76.3	P/P	59 - 130
2328713	Parathion Methyl	124	112	P/P	65 - 155
2328713	Pendimethalin	101	95.6	P/P	49 - 138
2328713	Phenytol	57.5	56.5	P/P	50 - 200
2328713	Phorate	110	84.8	P/P	54 - 161
2328713	Prodiamine	37.9	33.1	P/P	33 - 161
2328713	Prometon	69.6	77.9	P/P	48 - 140
2328713	Prometryn	87.1	74.5	P/P	55 - 134
2328713	Pronamide	93.4	80.3	P/P	66 - 137
2328713	Propanil	114	101	P/P	50 - 150
2328713	Propargite	128	126	P/P	50 - 200
2328713	Propiconazole	76.7	62.9	P/P	36 - 150
2328713	Pyraflufen Ethyl	74.0	68.4	P/P	50 - 150
2328713	Pyridaben	109	103	P/P	50 - 200
2328713	Pyriproxyfen	79.3	69.0	P/P	10 - 165
2328713	Simazine	94.8	80.1	P/P	57 - 145
2328713	Stirophos	73.3	63.4	P/P	50 - 150
2328713	Sulfentrazone	79.8	65.9	P/P	34 - 140
2328713	Tebuconazole	40.5	37.6	P/P	10 - 127
2328713	Terbufos	109	102	P/P	59 - 138
2328713	Terbuthylazine	90.1	75.1	P/P	68 - 119
2328713	Thiobencarb	64.7	64.4	P/P	50 - 150
2328713	Triadimefon	70.1	59.9	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P414328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328671	2,4-D	99.7	100	P/P	40 - 150
2328671	2,4,5-T	78.7	79.5	P/P	40 - 150
2328671	Acetaminophen	104	103	P/P	30 - 150
2328671	Acetamiprid	95.9	102	P/P	40 - 150
2328671	Afidopyropen	69.6	72.7	P/P	30 - 150
2328671	Bentazon	105	105	P/P	30 - 150
2328671	Benzovindiflupyr	92.3	94.7	P/P	40 - 150
2328671	Carbamazepine	104	103	P/P	40 - 150
2328671	Clothianidin	126	122	P/P	40 - 150
2328671	Dinotefuran	141	142	P/P	40 - 150
2328671	Diuron	86.5	86.7	P/P	40 - 150
2328671	Fenuron	85.9	90.1	P/P	40 - 150
2328671	Fluridone	86.3	78.4	P/P	40 - 150
2328671	Hydrocodone	93.3	100	P/P	40 - 150
2328671	Ibuprofen	72.5	78.8	P/P	40 - 150
2328671	Imazapyr	116	119	P/P	40 - 150
2328671	Imidacloprid	160	158	F/F	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P414328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328671	Linuron	71.0	64.1	P/P	40 - 150
2328671	Mandestrobin	82.9	81.9	P/P	40 - 150
2328671	MCPP	133	133	P/P	40 - 150
2328671	Naproxen	77.6	72.4	P/P	40 - 150
2328671	Primidone	103	104	P/P	40 - 150
2328671	Pyraclostrobin	95.1	91.5	P/P	40 - 150
2328671	Silvex	79.4	72.0	P/P	40 - 150
2328671	Thiamethoxam	147	149	P/P	40 - 150
2328671	Tolfenpyrad	53.0	51.2	P/P	30 - 150
2328671	Triclopyr	88.3	87.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P414386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329414	Acesulfame K	115	90.8	P/P	40 - 150
2329414	AMPA	95.7	72.3	P/P	40 - 150
2329414	Endothall	93.7	73.5	P/P	40 - 150
2329414	Glufosinate	88.0	68.6	P/P	40 - 150
2329414	Glyphosate	85.1	68.8	P/P	40 - 150
2329414	Sucralose	96.4	73.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P414624

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329687	Fluoride	97.6	97.0	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329305	Organic Carbon	94.7	95.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P414321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329409	Color (true)	1.68	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329312	Turbidity	7.09	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P414396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329260	Calcium	0.719	Spike	P	0 - 20
2329260	Iron	0.126	Spike	P	0 - 20
2329260	Magnesium	0.675	Spike	P	0 - 20
2329260	Potassium	0.102	Spike	P	0 - 20
2329260	Sodium	1.48	Spike	P	0 - 20
2329260	Strontium	5.41	Spike	P	0 - 20
2329260	Tin	1.34	Spike	P	0 - 20
2329260	Titanium	1.19	Spike	P	0 - 20
2329260	Vanadium	1.22	Spike	P	0 - 20
2329260	Zinc	1.41	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P414396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329260	Aluminum	0.235	Spike	P	0 - 20
2329260	Antimony	0.545	Spike	P	0 - 20
2329260	Arsenic	0.655	Spike	P	0 - 20
2329260	Barium	0.534	Spike	P	0 - 20
2329260	Beryllium	13.1	Spike	P	0 - 20
2329260	Boron	0.398	Spike	P	0 - 20
2329260	Cadmium	2.64	Spike	P	0 - 20
2329260	Chromium	1.41	Spike	P	0 - 20
2329260	Cobalt	1.67	Spike	P	0 - 20
2329260	Copper	0.632	Spike	P	0 - 20
2329260	Lead	0.258	Spike	P	0 - 20
2329260	Manganese	1.84	Spike	P	0 - 20
2329260	Molybdenum	1.90	Spike	P	0 - 20
2329260	Nickel	0.622	Spike	P	0 - 20
2329260	Selenium	2.06	Spike	P	0 - 20
2329260	Silver	1.60	Spike	P	0 - 20
2329260	Thallium	2.72	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329409	Chloride	0.438	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329409	Sulfate	0.403	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329410	Ammonia-N	0.567	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329254	Kjeldahl Nitrogen	1.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329353	NO2NO3-N	2.41	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329410	Total-P	0.546	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329411	O-Phosphate-P	0.617	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P414288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328713	Acetochlor	18.3	Spike	P	0 - 27
2328713	Alachlor	13.0	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P414288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328713	Ametryn	1.76	Spike	P	0 - 34
2328713	Atrazine	4.12	Spike	P	0 - 41
2328713	Atrazine Desethyl	10.7	Spike	P	0 - 38
2328713	Avobenzone	1.41	Spike	P	0 - 30
2328713	Azinphos Methyl	19.3	Spike	P	0 - 62
2328713	Azoxystrobin	7.31	Spike	P	0 - 32
2328713	Bromacil	13.6	Spike	P	0 - 30
2328713	Butylate	18.3	Spike	P	0 - 59
2328713	Caffeine	2.84	Spike	P	0 - 60
2328713	Carbophenothion	14.8	Spike	P	0 - 25
2328713	Carfentrazone Ethyl	9.09	Spike	P	0 - 26
2328713	Chlorfenapyr	5.19	Spike	P	0 - 30
2328713	Chlorpyrifos Ethyl	0.0625	Spike	P	0 - 27
2328713	Chlorpyrifos Methyl	10.2	Spike	P	0 - 26
2328713	Coumaphos	3.19	Spike	P	0 - 30
2328713	Cyanazine	16.5	Spike	P	0 - 58
2328713	Cyprodinil	18.6	Spike	P	0 - 30
2328713	Demeton	17.8	Spike	P	0 - 25
2328713	Diazinon	15.7	Spike	P	0 - 29
2328713	Difenoconazole	9.37	Spike	P	0 - 25
2328713	Dimethenamid	10.1	Spike	P	0 - 30
2328713	Dimethomorph	62.2	Spike	F	0 - 30
2328713	Disulfoton	2.65	Spike	P	0 - 33
2328713	Dithiopyr	10.2	Spike	P	0 - 22
2328713	EPTC	9.36	Spike	P	0 - 38
2328713	Ethion	6.63	Spike	P	0 - 79
2328713	Ethoprop	12.6	Spike	P	0 - 23
2328713	Etridiazole	11.7	Spike	P	0 - 30
2328713	Fenamiphos	2.79	Spike	P	0 - 58
2328713	Fenbuconazole	13.0	Spike	P	0 - 37
2328713	Fipronil	15.4	Spike	P	0 - 33
2328713	Fipronil Desulfinyl	17.2	Spike	P	0 - 26
2328713	Fipronil Sulfide	9.46	Spike	P	0 - 37
2328713	Fipronil Sulfone	16.4	Spike	P	0 - 50
2328713	Fluazifop-P-butyl	12.4	Spike	P	0 - 24
2328713	Fludioxonil	13.5	Spike	P	0 - 26
2328713	Flumioxazin	10.6	Spike	P	0 - 37
2328713	Flutolanil	0.996	Spike	P	0 - 26
2328713	Fluxapyroxad	13.2	Spike	P	0 - 34
2328713	Fonofos	7.98	Spike	P	0 - 27
2328713	Hexazinone	5.14	Spike	P	0 - 36
2328713	Imazalil	2.71	Spike	P	0 - 65
2328713	Iprodione	17.7	Spike	P	0 - 33
2328713	Loratadine	8.69	Spike	P	0 - 30
2328713	Malathion	0.613	Spike	P	0 - 44
2328713	Metalaxyl	18.2	Spike	P	0 - 38
2328713	Metolachlor	11.1	Spike	P	0 - 36
2328713	Metribuzin	4.85	Spike	P	0 - 63
2328713	Mevinphos	13.5	Spike	P	0 - 26
2328713	Molinate	4.21	Spike	P	0 - 40
2328713	Myclobutanil	12.8	Spike	P	0 - 21

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P414288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328713	Naled	7.64	Spike	P	0 - 26
2328713	Napropamide	13.2	Spike	P	0 - 30
2328713	Norflurazon	15.8	Spike	P	0 - 24
2328713	Octinoxate	21.8	Spike	P	0 - 30
2328713	Oxadiazon	9.29	Spike	P	0 - 27
2328713	Oxybenzone	98.2	Spike	F	0 - 30
2328713	Oxyfluorfen	13.3	Spike	P	0 - 24
2328713	Parathion Ethyl	13.2	Spike	P	0 - 28
2328713	Parathion Methyl	10.1	Spike	P	0 - 27
2328713	Pendimethalin	5.33	Spike	P	0 - 31
2328713	Phenytoin	1.89	Spike	P	0 - 30
2328713	Phorate	25.5	Spike	P	0 - 27
2328713	Prodiamine	13.6	Spike	P	0 - 52
2328713	Prometon	11.3	Spike	P	0 - 31
2328713	Prometryn	15.6	Spike	P	0 - 28
2328713	Pronamide	15.0	Spike	P	0 - 26
2328713	Propanil	12.1	Spike	P	0 - 30
2328713	Propargite	1.08	Spike	P	0 - 30
2328713	Propiconazole	14.2	Spike	P	0 - 31
2328713	Pyraflufen Ethyl	7.81	Spike	P	0 - 30
2328713	Pyridaben	5.60	Spike	P	0 - 30
2328713	Pyriproxyfen	13.8	Spike	P	0 - 50
2328713	Simazine	16.9	Spike	P	0 - 29
2328713	Stiropfos	14.4	Spike	P	0 - 30
2328713	Sulfentrazone	19.0	Spike	P	0 - 33
2328713	Tebuconazole	5.56	Spike	P	0 - 44
2328713	Terbufos	6.39	Spike	P	0 - 29
2328713	Terbutylazine	18.1	Spike	P	0 - 27
2328713	Thiobencarb	0.423	Spike	P	0 - 30
2328713	Triadimefon	15.8	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328671	2,4-D	0.733	Spike	P	0 - 30
2328671	2,4,5-T	1.03	Spike	P	0 - 30
2328671	Acetaminophen	1.25	Spike	P	0 - 30
2328671	Acetamiprid	6.52	Spike	P	0 - 30
2328671	Afidopyropen	4.39	Spike	P	0 - 30
2328671	Bentazon	0.508	Spike	P	0 - 30
2328671	Benzovindiflupyr	2.55	Spike	P	0 - 30
2328671	Carbamazepine	0.940	Spike	P	0 - 30
2328671	Clothianidin	3.38	Spike	P	0 - 30
2328671	Dinotefuran	0.620	Spike	P	0 - 30
2328671	Diuron	0.270	Spike	P	0 - 30
2328671	Fenuron	4.79	Spike	P	0 - 30
2328671	Fluridone	7.57	Spike	P	0 - 30
2328671	Hydrocodone	6.98	Spike	P	0 - 30
2328671	Ibuprofen	8.29	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P414328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328671	Imazapyr	2.78	Spike	P	0 - 30
2328671	Imidacloprid	1.70	Spike	P	0 - 30
2328671	Linuron	10.2	Spike	P	0 - 30
2328671	Mandestrobin	1.19	Spike	P	0 - 30
2328671	MCPP	0.234	Spike	P	0 - 30
2328671	Naproxen	6.94	Spike	P	0 - 30
2328671	Primidone	0.838	Spike	P	0 - 30
2328671	Pyraclostrobin	3.81	Spike	P	0 - 30
2328671	Silvex	9.84	Spike	P	0 - 30
2328671	Thiamethoxam	1.33	Spike	P	0 - 30
2328671	Tolfenpyrad	3.57	Spike	P	0 - 30
2328671	Triclopyr	0.661	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P414386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329414	Acesulfame K	23.5	Spike	P	0 - 30
2329414	AMPA	27.8	Spike	P	0 - 30
2329414	Endothall	24.1	Spike	P	0 - 30
2329414	Glufosinate	24.8	Spike	P	0 - 30
2329414	Glyphosate	19.8	Spike	P	0 - 30
2329414	Sucralose	23.7	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P414623

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329687	Total Alkalinity	2.03	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P414656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329284	TDS	2.60	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P414624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329687	Fluoride	0.503	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P414512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329305	Organic Carbon	0.613	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2329414
Field Sample ID: G2CE0104

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	65.8	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.2	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	30 - 160

Lab Sample ID: 2329419
Field Sample ID: G2CE0104

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	43.0	P	20 - 200
EPA 8270E	Simazine-d10	84.2	P	71 - 140
EPA 8270E	Terbufos-d10	88.0	P	62 - 131
EPA 8270E	Terphenyl-d14	66.7	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112366

Included Lab Sample IDs: 2329411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	99.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112370

Included Lab Sample IDs: 2329409

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: A112372

Included Lab Sample IDs: 2329409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	102	P/P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112457

Included Lab Sample IDs: 2329418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	99.3	P/P	90 - 110
Antimony	98.6	97.4	P/P	90 - 110
Arsenic	98.4	98.3	P/P	90 - 110
Barium	98.5	97.6	P/P	90 - 110
Beryllium	94.3	92.7	P/P	90 - 110
Boron	102	100	P/P	90 - 110
Cadmium	98.3	98.1	P/P	90 - 110
Chromium	98.4	97.7	P/P	90 - 110
Cobalt	97.0	97.5	P/P	90 - 110
Copper	97.7	97.9	P/P	90 - 110
Lead	98.9	98.4	P/P	90 - 110
Manganese	98.1	97.9	P/P	90 - 110
Molybdenum	98.1	98.4	P/P	90 - 110
Nickel	98.0	98.3	P/P	90 - 110
Selenium	95.7	95.7	P/P	90 - 110
Silver	98.8	99.4	P/P	90 - 110
Thallium	97.8	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A112486

Included Lab Sample IDs: 2329410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.9	94.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112498

Included Lab Sample IDs: 2329414

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

Reference Method: EPA 8321B
Run ID: A112498
Included Lab Sample IDs: 2329414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.0	95.2	P/P	60 - 160
Endothall	93.7	92.3	P/P	60 - 160
Glufosinate	104	99.8	P/P	60 - 160
Glyphosate	99.5	95.9	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A112499
Included Lab Sample IDs: 2329414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	133	140	P/P	60 - 160
Sucralose	99.7	103	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A112515
Included Lab Sample IDs: 2329414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	96.3	P/P	50 - 150
2,4,5-T	98.6	102	P/P	50 - 150
Acetaminophen	105	106	P/P	60 - 160
Acetamiprid	103	105	P/P	50 - 150
Afidopyropen	98.4	103	P/P	50 - 150
Bentazon	104	110	P/P	50 - 160
Benzovindiflupyr	110	109	P/P	50 - 150
Carbamazepine	105	102	P/P	60 - 150
Clothianidin	104	101	P/P	60 - 150
Dinotefuran	105	99.0	P/P	50 - 150
Diuron	110	116	P/P	60 - 160
Fenuron	101	99.4	P/P	60 - 150
Fluridone	109	106	P/P	60 - 160
Hydrocodone	98.6	99.2	P/P	60 - 150
Ibuprofen	102	95.9	P/P	50 - 160
Imazapyr	101	100	P/P	50 - 150
Imidacloprid	99.8	97.7	P/P	60 - 150
Linuron	102	96.5	P/P	60 - 150
Mandestrobin	107	107	P/P	50 - 150
MCPP	102	99.8	P/P	50 - 150
Naproxen	105	91.4	P/P	50 - 160
Primidone	94.8	96.5	P/P	60 - 150
Pyraclostrobin	111	110	P/P	60 - 150
Silvex	102	103	P/P	50 - 150
Thiamethoxam	101	98.1	P/P	50 - 150
Tolfenpyrad	103	101	P/P	60 - 150
Triclopyr	100	100	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112531
Included Lab Sample IDs: 2329410

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112531

Included Lab Sample IDs: 2329410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	97.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112541

Included Lab Sample IDs: 2329418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	103	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Magnesium	102	103	P/P	90 - 110
Potassium	102	104	P/P	90 - 110
Sodium	103	104	P/P	90 - 110
Tin	103	99.6	P/P	90 - 110
Titanium	102	101	P/P	90 - 110
Vanadium	103	101	P/P	90 - 110
Zinc	103	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112552

Included Lab Sample IDs: 2329409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.7	98.4	P/P	90 - 110
Sulfate	98.7	99.2	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A112563

Included Lab Sample IDs: 2329409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.0	93.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112563

Included Lab Sample IDs: 2329409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.6	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112585

Included Lab Sample IDs: 2329419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.8		P	80 - 120
Alachlor	90.2		P	80 - 120
Ametryn	96.9		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Azoxystrobin	95.7		P	80 - 120
Bromacil	91.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112585
Included Lab Sample IDs: 2329419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Butylate	99.1		P	80 - 120
Caffeine	101		P	80 - 120
Carbophenothion	98.4		P	80 - 120
Carfentrazone Ethyl	94.9		P	80 - 120
Chlorfenapyr	88.6		P	80 - 120
Chlorpyrifos Ethyl	98.6		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Coumaphos	99.4		P	80 - 120
Cyanazine	90.1		P	80 - 120
Cyprodinil	89.0		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	94.9		P	80 - 120
Difenoconazole	87.6		P	80 - 120
Dimethenamid	96.3		P	80 - 120
Dimethomorph	98.7		P	80 - 120
Disulfoton	97.8		P	80 - 120
Dithiopyr	93.5		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	97.8		P	80 - 120
Ethoprop	99.7		P	80 - 120
Etridiazole	93.1		P	80 - 120
Fenamiphos	97.6		P	80 - 120
Fenbuconazole	91.9		P	80 - 120
Fipronil	96.2		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	95.8		P	80 - 120
Fipronil Sulfone	89.7		P	80 - 120
Fluazifop-P-butyl	92.3		P	80 - 120
Fludioxonil	89.4		P	80 - 120
Flumioxazin	89.3		P	80 - 120
Flutolanil	91.8		P	80 - 120
Fluxapyroxad	86.9		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	95.6		P	80 - 120
Imazalil	90.9		P	80 - 120
Iprodione	108		P	80 - 120
Loratadine	98.7		P	80 - 120
Malathion	97.9		P	80 - 120
Metalaxyl	97.2		P	80 - 120
Metolachlor	94.8		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	99.3		P	80 - 120
Myclobutanil	90.1		P	80 - 120
Naled	98.9		P	80 - 120
Napropamide	93.4		P	80 - 120
Norflurazon	93.2		P	80 - 120
Oxadiazon	92.7		P	80 - 120
Oxyfluorfen	94.9		P	80 - 120
Parathion Ethyl	97.6		P	80 - 120
Parathion Methyl	94.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112585
Included Lab Sample IDs: 2329419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pendimethalin	93.8		P	80 - 120
Phenytoin	91.0		P	80 - 120
Phorate	104		P	80 - 120
Prodiamine	98.6		P	80 - 120
Prometon	93.3		P	80 - 120
Prometryn	94.5		P	80 - 120
Pronamide	88.9		P	80 - 120
Propanil	103		P	80 - 120
Propargite	97.0		P	80 - 120
Propiconazole	93.5		P	80 - 120
Pyraflufen Ethyl	92.1		P	80 - 120
Pyridaben	94.5		P	80 - 120
Pyriproxyfen	90.3		P	80 - 120
Simazine	97.9		P	80 - 120
Stirophos	106		P	80 - 120
Sulfentrazone	86.4		P	80 - 120
Tebuconazole	95.0		P	80 - 120
Terbufos	99.9		P	80 - 120
Terbutylazine	98.0		P	80 - 120
Thiobencarb	80.9		P	80 - 120
Triadimefon	98.6		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A112589
Included Lab Sample IDs: 2329410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.5	95.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A112599
Included Lab Sample IDs: 2329418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	91.6	96.9	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A112620
Included Lab Sample IDs: 2329419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	110		P	80 - 120
Octinoxate	95.2		P	80 - 120
Oxybenzone	92.8		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A112645
Included Lab Sample IDs: 2329410

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112688
Included Lab Sample IDs: 2329419

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A112781
Included Lab Sample IDs: 2329410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	97.0	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	101				1.68	
EPA 180.1 Rev. 2.0	Turbidity	96.6				7.09	
EPA 200.7 Rev. 4.4	Calcium	104	103	104			0.719
	Iron	107	108	108	111		0.126
	Magnesium	110	111	109	114		0.675
	Potassium	105	102	102	105		0.102
	Sodium	103	102	110			1.48
	Strontium	93.9	94.1	99.4	111		5.41
	Tin	102	101	103	104		1.34
	Titanium	102	103	104	104		1.19
	Vanadium	95.2	98.4	99.6	99.7		1.22
	Zinc	100	102	104	102		1.41
EPA 200.8 Rev. 5.4	Aluminum	97.9	102	102	103		0.235
	Antimony	96.8	101	101	99.4		0.545
	Arsenic	97.7	100	99.7	99.6		0.655
	Barium	99.4	103	102	103		0.534
	Beryllium	95.3	86.1	98.1	93.3		13.1
	Boron	103	107	107	104		0.398
	Cadmium	94.7	100	97.9	99.5		2.64
	Chromium	95.7	100	98.9	98.0		1.41
	Cobalt	96.9	99.4	97.8	98.3		1.67
	Copper	96.2	99.6	98.9	98.6		0.632
	Lead	97.8	102	102	101		0.258
	Manganese	96.4	101	98.5	104		1.84
	Molybdenum	96.2	103	101	101		1.90
	Nickel	97.6	99.1	98.5	99.8		0.622
	Selenium	96.7	96.4	98.5	96.7		2.06
	Silver	97.2	99.0	97.4	98.4		1.60
	Thallium	98.7	104	107	103		2.72
EPA 300.0 Rev. 2.1	Chloride	95.3	95.6	94.8		0.438	
	Sulfate	97.1	96.1	94.4		0.403	
EPA 350.1 Rev. 2.0	Ammonia-N		96.6	97.2			0.567
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.5	106	103			1.99
EPA 353.2 Rev. 2.0	NO2NO3-N	100	105	102			2.41
EPA 365.1 Rev. 2.0	Total-P	101	103	102			0.546
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	96.9	97.5			0.617
EPA 8270E	Acetochlor	80.9	90.1	75.0			18.3
	Alachlor	81.7	82.1	72.1			13.0
	Ametryn	93.2	102	99.9			1.76
	Atrazine	80.7					4.12
	Atrazine Desethyl	70.2	63.9	56.4			10.7
	Avobenzone	97.6	108	110			1.41
	Azinphos Methyl	102	126	104			19.3
	Azoxystrobin	120	116	108			7.31
	Bromacil	65.8	82.3	71.8			13.6
	Butylate	52.0	49.9	41.5			18.3
	Caffeine	72.0	98.3	95.6			2.84
	Carbophenothion	74.6	77.4	66.8			14.8
	Carfentrazone Ethyl	92.2	95.0	86.7			9.09
	Chlorfenapyr	71.5	73.9	77.8			5.19
	Chlorpyrifos Ethyl	78.8	68.9	69.0			0.0625
	Chlorpyrifos Methyl	83.3	88.2	79.6			10.2
	Coumaphos	58.7	74.3	71.9			3.19
	Cyanazine	73.6	81.0	68.7			16.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Cyprodinil	95.7	100	83.2			18.6
	Demeton	68.5	111	92.5			17.8
	Diazinon	97.6	100	85.5			15.7
	Difenoconazole	168	102	92.5			9.37
	Dimethenamid	59.1	67.5	61.0			10.1
	Dimethomorph	126	88.7	46.6			62.2
	Disulfoton	93.4	84.4	82.2			2.65
	Dithiopyr	75.8	71.1	64.2			10.2
	EPTC	53.4	44.4	40.5			9.36
	Ethion	57.3	55.3	51.7			6.63
	Ethoprop	98.2	101	88.9			12.6
	Etridiazole	60.6	60.3	53.6			11.7
	Fenamiphos	62.4	86.1	88.5			2.79
	Fenbuconazole	76.1	84.8	74.5			13.0
	Fipronil	82.2	89.2	76.4			15.4
	Fipronil Desulfinyl	81.5	98.8	83.1			17.2
	Fipronil Sulfide	76.9	78.0	69.3			9.46
	Fipronil Sulfone	75.3	69.9	56.1			16.4
	Fluazifop-P-butyl	89.4	84.2	74.4			12.4
	Fludioxonil	63.1	76.8	67.1			13.5
	Flumioxazin	51.0	109	98.1			10.6
	Flutolanil	63.8	73.6	72.9			0.996
	Fluxapyroxad	119	64.0	56.0			13.2
	Fonofos	89.8	86.0	79.4			7.98
	Hexazinone	69.1	82.7	78.5			5.14
	Imazalil	63.2	94.1	91.6			2.71
	Iprodione	73.5	81.7	68.4			17.7
	Loratadine	143	87.2	95.1			8.69
	Malathion	80.0	79.9	78.7			0.613
	Metalaxyl	76.4	80.2	66.8			18.2
	Metolachlor	74.5	72.2	64.6			11.1
	Metribuzin	106	98.5	93.8			4.85
	Mevinphos	85.5	105	91.8			13.5
	Molinate	64.8	64.7	62.0			4.21
	Myclobutanil	58.2	86.2	75.9			12.8
	Naled	82.8	87.8	81.3			7.64
	Napropamide	41.9	64.8	56.8			13.2
	Norflurazon	64.3	76.3	65.1			15.8
	Octinoxate	61.6	42.3	52.7			21.8
	Oxadiazon	70.1	71.4	65.1			9.29
	Oxybenzone	69.5	53.6	157			98.2
	Oxyfluorfen	73.5	101	88.6			13.3
	Parathion Ethyl	90.9	87.1	76.3			13.2
	Parathion Methyl	116	124	112			10.1
	Pendimethalin	85.8	101	95.6			5.33
	Phenytol	20.3	57.5	56.5			1.89
	Phorate	82.0	110	84.8			25.5
	Prodiamine	49.6	37.9	33.1			13.6
	Prometon	69.1	69.6	77.9			11.3
	Prometryn	88.5	87.1	74.5			15.6
	Pronamide	89.1	93.4	80.3			15.0
	Propanil	84.6	114	101			12.1
	Propargite	100	128	126			1.08
	Propiconazole	76.0	76.7	62.9			14.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Pyraflufen Ethyl	112	74.0	68.4			7.81
	Pyridaben	69.2	109	103			5.60
	Pyriproxyfen	38.4	79.3	69.0			13.8
	Simazine	81.5	94.8	80.1			16.9
	Stirophos	64.3	73.3	63.4			14.4
	Sulfentrazone	52.8	79.8	65.9			19.0
	Tebuconazole	20.7	40.5	37.6			5.56
	Terbufos	115	109	102			6.39
	Terbutylazine	83.3	90.1	75.1			18.1
	Thiobencarb	72.7	64.7	64.4			0.423
	Triadimefon	66.5	70.1	59.9			15.8
	2,4-D	92.1	99.7	100			0.733
EPA 8321B	2,4,5-T	74.9	78.7	79.5			1.03
	Acesulfame K	129	115	90.8			23.5
	Acetaminophen	68.4	104	103			1.25
	Acetamiprid	88.6	95.9	102			6.52
	Afidopyropen	71.8	69.6	72.7			4.39
	AMPA	97.7	95.7	72.3			27.8
	Bentazon	119	105	105			0.508
	Benzovindiflupyr	90.1	92.3	94.7			2.55
	Carbamazepine	102	104	103			0.940
	Clothianidin	98.0	126	122			3.38
	Dinotefuran	99.6	141	142			0.620
	Diuron	89.1	86.5	86.7			0.270
	Endothall	95.8	93.7	73.5			24.1
	Fenuron	106	85.9	90.1			4.79
	Fluridone	83.0	86.3	78.4			7.57
	Glufosinate	97.7	88.0	68.6			24.8
	Glyphosate	95.2	85.1	68.8			19.8
	Hydrocodone	90.1	93.3	100			6.98
	Ibuprofen	78.0	72.5	78.8			8.29
	Imazapyr	99.4	116	119			2.78
	Imidacloprid	96.6	160	158			1.70
	Linuron	71.1	71.0	64.1			10.2
	Mandestrobin	83.0	82.9	81.9			1.19
	MCPP	119	133	133			0.234
	Naproxen	76.0	77.6	72.4			6.94
	Primidone	94.7	103	104			0.838
	Pyraclostrobin	94.8	95.1	91.5			3.81
	Silvex	75.0	79.4	72.0			9.84
	Sucralose	95.3	96.4	73.2			23.7
	Thiamethoxam	94.5	147	149			1.33
	Tolfenpyrad	55.0	53.0	51.2			3.57
	Triclopyr	88.1	88.3	87.7			0.661
SM 2320 B-2011	Total Alkalinity	94.1				2.03	
SM 2540 C-2011	TDS					2.60	
SM 4500-F- C-2011	Fluoride	96.7	97.6	97.0			0.503
SM 5310 B-2011	Organic Carbon	95.0	94.7	95.4			0.613

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2329409

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2329409
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2329418
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2329418
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2329409
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2329409
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2329410
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2329410
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2329410
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2329410
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2329411
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2329419
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2329419
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2329414
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2329409
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2329418
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2329409
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2329409
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2329409
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2329410

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	05/24/2022			05/24/2022 15:31	Anna M. Plaviak	2329409
EPA 180.1 Rev. 2.0	05/24/2022			05/24/2022 14:54	Khloe J Berg	2329409
EPA 200.7 Rev. 4.4	05/24/2022	05/26/2022 10:15	Megan Whitefoot	05/31/2022 22:03	McKinley C Carter	2329418
	05/24/2022	05/26/2022 10:15	Megan Whitefoot	06/02/2022 19:34	McKinley C Carter	2329418
EPA 200.8 Rev. 5.4	05/24/2022	05/26/2022 10:15	Megan Whitefoot	05/26/2022 18:05	Alexander Thompson	2329418
EPA 300.0 Rev. 2.1	05/24/2022			06/01/2022 16:23	Anna M. Plaviak	2329409
EPA 350.1 Rev. 2.0	05/24/2022			06/13/2022 14:00	Judith K. Clark	2329410
EPA 351.2 Rev. 2.0	05/24/2022	06/02/2022 08:23	Samantha L Bates	06/02/2022 16:33	Alexandra J Mattheus	2329410
EPA 353.2 Rev. 2.0	05/24/2022			06/06/2022 18:23	Touraj Touran	2329410
EPA 365.1 Rev. 2.0	05/24/2022	05/27/2022 16:17	Adam P Silver	05/31/2022 15:56	James L Waggeberby	2329410
EPA 365.1 Rev. 2.0 dissolved	05/24/2022			05/24/2022 15:32	James L Waggeberby	2329411
EPA 8270E	05/24/2022	05/26/2022 08:00	Fe-Val Siddell	05/27/2022 18:39	Vandana T. Nagar	2329419
	05/24/2022	05/26/2022 08:00	Fe-Val Siddell	06/01/2022 21:38	Arthur Maknenko	2329419
	05/24/2022	05/26/2022 08:00	Fe-Val Siddell	06/06/2022 17:05	Vandana T. Nagar	2329419
EPA 8321B	05/24/2022	05/25/2022 10:00	June Rhew	05/28/2022 08:23	Juyoung Kim	2329414
	05/24/2022	05/26/2022 10:00	Umesh Chiluwai	05/26/2022 12:11	Umesh Chiluwai	2329414
	05/24/2022	05/26/2022 10:00	Umesh Chiluwai	05/27/2022 18:28	Umesh Chiluwai	2329414
SM 2320 B-2011	05/24/2022			06/01/2022 23:17	Dale L. Simmons	2329409
SM 2340 B-2011	05/24/2022			05/31/2022 22:03	McKinley C Carter	2329418
SM 2540 C-2011	05/24/2022			05/25/2022 15:29	Yijie Li	2329409
SM 2540 D-2011	05/24/2022			05/25/2022 15:29	Yijie Li	2329409
SM 4500-F- C-2011	05/24/2022			06/01/2022 23:17	Dale L. Simmons	2329409
SM 5310 B-2011	05/24/2022			05/27/2022 10:19	Khloe J Berg	2329410