Chemical Analysis Report

NE-DIST-2022-04-12-01

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

Event Description: **Deep SCI and Sixteen SCI**
Request ID: **RQ-2022-02-28-08**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
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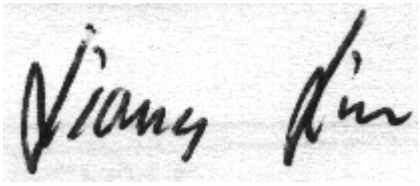
Certified by: Liang Lin, Environmental Administrator

Date Certified: 29-APR-2022 13:11



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: Upper Little Hatchet at Airport field **Collection Date/Time: 04/11/2022 12:05**

Field ID: G1NE0949 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2318385	DEP SOP: NU-094-1	Color (true)**	130	A	PCU	P412266	
	EPA 180.1 Rev. 2.0	Turbidity	4.7	A	NTU	P412262	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P412485	
		Sulfate	12		mg SO4/L	P412487	
	SM 2320 B-2011	Total Alkalinity	47		mg CaCO3/L	P412679	
	SM 2540 C-2011	TDS	120	A	mg/L	P412662	
	SM 2540 D-2011	TSS	3	I A	mg/L	P412558	
	SM 4500-F- C-2011	Fluoride	0.082	I	mg F/L	P412683	
2318386	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P412377	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P412735	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P412336	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P412449	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P412476	
2318387	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P412256	
2318391	EPA 8321B	2,4-D	0.0020	U	ug/L	P412254	
		Acesulfame K	0.10	U	ug/L	P412352	
		2,4,5-T	0.0040	U	ug/L	P412254	
		AMPA	0.18	I	ug/L	P412352	
		Acetaminophen	0.0080	U	ug/L	P412254	
		Acetamiprid	0.0020	U	ug/L	P412254	
		Endothall	0.25	U	ug/L	P412352	
		Glufosinate	0.10	U	ug/L	P412352	
		Glyphosate	0.10	U	ug/L	P412352	
		Afidopyropen	0.0020	U	ug/L	P412254	
		Bentazon	0.0058		ug/L	P412254	
		Sucralose	0.090		ug/L	P412352	
		Benzovindiflupyr	0.0020	U	ug/L	P412254	
		Carbamazepine	8.0E-04	U	ug/L	P412254	
		Clothianidin	0.0020	U	ug/L	P412254	
		Dinotefuran	0.0020	U	ug/L	P412254	
		Diuron	0.0021	I	ug/L	P412254	
		Fenuron	0.032	U	ug/L	P412254	MS
		Fluridone	8.0E-04	U	ug/L	P412254	
		Imazapyr	0.016		ug/L	P412254	
		Hydrocodone	0.0020	U	ug/L	P412254	
		Ibuprofen	0.020	U	ug/L	P412254	
		Imidacloprid	0.025		ug/L	P412254	
		Linuron	0.0040	U	ug/L	P412254	
		Mandestrobin	0.0020	U	ug/L	P412254	
		MCPP	0.0040	U	ug/L	P412254	
		Naproxen	0.0080	U	ug/L	P412254	
		Primidone	0.0040	U	ug/L	P412254	
		Pyraclostrobin	0.0020	U	ug/L	P412254	

Field ID: G1NE0949 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2318391	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P412254	
		Tolfenpyrad	0.0020	U	ug/L	P412254	
		Triclopyr	0.0040	U	ug/L	P412254	
2318392	EPA 200.7 Rev. 4.4	Barium	16.8		ug/L	P412351	
		Calcium	23.9		mg/L	P412351	
		Iron	730		ug/L	P412351	
		Magnesium	3.48		mg/L	P412351	
		Manganese	11.6		ug/L	P412351	
		Potassium	0.84	I	mg/L	P412351	
		Sodium	7.7		mg/L	P412351	
		Zinc	6.4	I	ug/L	P412351	
	EPA 200.8 Rev. 5.4	Aluminum	466		ug/L	P412351	
		Antimony	0.10	I	ug/L	P412351	
		Arsenic	0.89		ug/L	P412351	
		Beryllium	0.068		ug/L	P412351	
		Boron**	24.4		ug/L	P412351	
		Cadmium	0.020	U	ug/L	P412351	
		Chromium	1.5	I	ug/L	P412351	
		Copper	0.85		ug/L	P412351	
		Lead	0.57		ug/L	P412351	
		Nickel	0.71	I	ug/L	P412351	
		Selenium	0.23	I	ug/L	P412351	
		Silver	0.010	U	ug/L	P412351	
		Thallium	0.10	U	ug/L	P412351	
	SM 2340 B-2011	Hardness	74.0		mg/L	P412351	
2318393	EPA 8270E	Oxybenzone**	9.6	U	ng/L	P412269	
		Acetochlor	0.24	U	ng/L	P412269	
		Octinoxate**	19	U	ng/L	P412269	
		Alachlor	0.24	U	ng/L	P412269	
		Avobenzone**	96	U	ng/L	P412269	
		Ametryn	0.58	U	ng/L	P412269	
		Atrazine	2.0		ng/L	P412269	
		Atrazine Desethyl	1.4	U	ng/L	P412269	
		Azinphos Methyl	1.9	U	ng/L	P412269	
		Azoxystrobin**	0.48	U	ng/L	P412269	
		Bromacil	9.4		ng/L	P412269	
		Butylate	0.39	U	ng/L	P412269	
		Caffeine**	7.2	U	ng/L	P412269	
		Carbophenothion	0.19	U	ng/L	P412269	
		Carfentrazone Ethyl**	0.096	U	ng/L	P412269	
		Chlorfenapyr**	0.17	UJ	ng/L	P412269	LCS
		Chlorpyrifos Ethyl	0.24	U	ng/L	P412269	
		Chlorpyrifos Methyl	0.048	U	ng/L	P412269	
		Coumaphos**	0.48	U	ng/L	P412269	
		Cyanazine	3.1	U	ng/L	P412269	

Field ID: G1NE0949 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2318393	EPA 8270E	Cyprodinil**	0.096	U	ng/L	P412269	
		Demeton	1.4	U	ng/L	P412269	
		Diazinon	0.12	U	ng/L	P412269	
		Difenoconazole**	0.58	U	ng/L	P412269	
		Dimethenamid**	0.096	U	ng/L	P412269	
		Dimethomorph**	0.17	U	ng/L	P412269	MS
		Disulfoton	0.48	U	ng/L	P412269	
		Dithiopyr**	0.17	U	ng/L	P412269	
		EPTC	1.2	U	ng/L	P412269	
		Ethion	0.14	U	ng/L	P412269	
		Ethoprop	0.096	U	ng/L	P412269	
		Etridiazole**	0.14	U	ng/L	P412269	
		Fenamiphos	0.48	U	ng/L	P412269	
		Fenbuconazole**	0.12	U	ng/L	P412269	
		Fipronil	0.24	U	ng/L	P412269	
		Fipronil Desulfinyl**	0.12	U	ng/L	P412269	
		Fipronil Sulfide	0.46	I	ng/L	P412269	
		Fipronil Sulfone	0.47	I	ng/L	P412269	
		Fluazifop-P-butyl**	0.096	U	ng/L	P412269	
		Fludioxonil**	0.12	U	ng/L	P412269	
		Flumioxazin**	1.7	U	ng/L	P412269	
		Flutolanil**	6.7		ng/L	P412269	
		Fluxapyroxad**	0.096	U	ng/L	P412269	
		Fonofos	0.19	U	ng/L	P412269	
		Hexazinone	0.90	I	ng/L	P412269	
		Imazalil**	0.72	U	ng/L	P412269	
		Iprodione**	0.58	U	ng/L	P412269	
		Loratadine**	0.096	U	ng/L	P412269	
		Malathion	0.34	U	ng/L	P412269	
		Metalaxyl	0.72	U	ng/L	P412269	
		Metolachlor	0.34	U	ng/L	P412269	
		Metribuzin	2.4	U	ng/L	P412269	
		Mevinphos	1.0	U	ng/L	P412269	
		Molinate	0.29	U	ng/L	P412269	
		Myclobutanil**	0.24	U	ng/L	P412269	
		Naled**	1.4	U	ng/L	P412269	
		Napropamide**	0.39	U	ng/L	P412269	
		Norflurazon	0.48	U	ng/L	P412269	
		Oxadiazon	68		ng/L	P412269	
		Oxyfluorfen**	0.14	U	ng/L	P412269	
		Parathion Ethyl	0.24	U	ng/L	P412269	
		Parathion Methyl	0.53	U	ng/L	P412269	
		Pendimethalin	0.96	U	ng/L	P412269	
		Phenytoin**	3.4	U	ng/L	P412269	MS, RPD
		Phorate	0.51	U	ng/L	P412269	

Field ID: G1NE0949 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2318393	EPA 8270E	Prodiamine**	0.17	U	ng/L	P412269	MS, RPD
		Prometon	0.87	U	ng/L	P412269	
		Prometryn	0.19	U	ng/L	P412269	
		Pronamide**	1.2		ng/L	P412269	
		Propanil**	0.12	U	ng/L	P412269	
		Propargite**	1.4	U	ng/L	P412269	
		Propiconazole**	0.48	U	ng/L	P412269	
		Pyraflufen Ethyl**	0.24	U	ng/L	P412269	
		Pyridaben**	0.43	U	ng/L	P412269	
		Pyriproxyfen**	0.12	U	ng/L	P412269	
		Simazine	0.48	U	ng/L	P412269	
		Stirophos**	0.12	U	ng/L	P412269	
		Sulfentrazone**	9.1		ng/L	P412269	
		Tebuconazole**	0.64	I	ng/L	P412269	
		Terbufos	0.096	U	ng/L	P412269	
		Terbuthylazine	0.41	U	ng/L	P412269	
		Thiobencarb**	0.58	U	ng/L	P412269	
		Triadimefon**	0.24	U	ng/L	P412269	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for chromium are unavailable for one of two spiked samples because of high 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: P412266

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412262

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412351

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412351

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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
Copper	0.40	U	ug/L
Lead	0.20	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: P412485

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412487

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412377

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412735

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412336

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412449

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412256

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

Reference Method: EPA 8270E
Batch ID: P412269

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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P412269

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P412269

Component	Result	Code	Units
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
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: P412269

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: P412254

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P412254

Component	Result	Code	Units
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	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: P412352

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: P412679

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

Reference Method: SM 2540 C-2011
Batch ID: P412662

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P412558

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P412683

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412476

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: P412266

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.3		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	108		P	85 - 115
Manganese	104		P	85 - 115
Potassium	105		P	85 - 115
Sodium	105		P	85 - 115
Zinc	97.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	105		P	85 - 115
Beryllium	104		P	85 - 115
Boron	109		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	101		P	85 - 115
Copper	101		P	85 - 115
Lead	104		P	85 - 115
Nickel	104		P	85 - 115
Selenium	101		P	85 - 115
Silver	104		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412487

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412377

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412735

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412336

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412256

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

Reference Method: EPA 8270E
Batch ID: P412269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.7		P	70 - 121
Alachlor	92.3		P	68 - 119
Ametryn	103		P	64 - 139
Atrazine	105		P	76 - 120
Atrazine Desethyl	64.9		P	44 - 126
Avobenzone	91.4		P	76 - 212
Azinphos Methyl	107		P	43 - 192
Azoxystrobin	142		P	36 - 224
Bromacil	66.7		P	52 - 121
Butylate	74.3		P	28 - 91.0
Caffeine	76.0		P	50 - 134
Carbophenothion	119		P	56 - 129
Carfentrazone Ethyl	129		P	60 - 141
Chlorfenapyr	122		F	56 - 115
Chlorpyrifos Ethyl	86.3		P	60 - 118
Chlorpyrifos Methyl	71.6		P	68 - 119
Coumaphos	65.0		P	18 - 250
Cyanazine	179		P	61 - 250
Cyprodinil	59.0		P	55 - 145
Demeton	71.4		P	30 - 159
Diazinon	72.4		P	70 - 123
Difenoconazole	62.8		P	49 - 204

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dimethenamid	69.6		P	64 - 115
Dimethomorph	170		P	12 - 219
Disulfoton	72.2		P	44 - 125
Dithiopyr	86.8		P	64 - 115
EPTC	61.6		P	28 - 86.0
Ethion	36.3		P	33 - 125
Ethoprop	104		P	64 - 116
Etridiazole	69.2		P	34 - 91.0
Fenamiphos	71.8		P	12 - 127
Fenbuconazole	84.1		P	59 - 151
Fipronil	67.8		P	67 - 129
Fipronil Desulfinyl	118		P	65 - 127
Fipronil Sulfide	113		P	61 - 116
Fipronil Sulfone	116		P	55 - 117
Fluazifop-P-butyl	110		P	62 - 127
Fludioxonil	126		P	62 - 128
Flumioxazin	62.2		P	33 - 250
Flutolanil	71.1		P	56 - 127
Fluxapyroxad	59.6		P	45 - 128
Fonofos	70.1		P	62 - 111
Hexazinone	80.1		P	46 - 139
Imazalil	47.7		P	38 - 142
Iprodione	70.8		P	47 - 135
Loratadine	220		P	10 - 244
Malathion	77.3		P	61 - 139
Metalaxyl	57.8		P	10 - 119
Metolachlor	78.0		P	65 - 118
Metribuzin	89.1		P	51 - 250
Mevinphos	80.7		P	53 - 121
Molinate	60.0		P	42 - 96.0
Myclobutanil	66.1		P	55 - 128
Naled	75.6		P	10 - 98.0
Napropamide	53.2		P	49 - 121
Norflurazon	110		P	61 - 126
Octinoxate	85.2		P	30 - 159
Oxadiazon	65.2		P	59 - 116
Oxybenzone	77.1		P	61 - 139
Oxyfluorfen	76.6		P	64 - 137
Parathion Ethyl	98.3		P	70 - 112
Parathion Methyl	86.2		P	76 - 133
Pendimethalin	78.5		P	52 - 117
Phenytoin	15.6		P	10 - 199
Phorate	83.5		P	48 - 121
Prodiamine	31.8		P	26 - 142
Prometon	74.2		P	43 - 123
Prometryn	95.6		P	66 - 127
Pronamide	100		P	75 - 121
Propanil	85.5		P	45 - 150
Propargite	90.0		P	42 - 208
Propiconazole	109		P	60 - 125
Pyraflufen Ethyl	108		P	70 - 138
Pyridaben	71.3		P	35 - 245

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyriproxyfen	78.5		P	30 - 149
Simazine	98.3		P	72 - 125
Stirophos	35.9		P	29 - 164
Sulfentrazone	48.7		P	21 - 139
Tebuconazole	15.3		P	10 - 115
Terbufos	105		P	60 - 123
Terbuthylazine	75.8		P	72 - 115
Thiobencarb	76.7		P	31 - 139
Triadimefon	100		P	65 - 116

Reference Method: EPA 8321B
Batch ID: P412254

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	98.5		P	40 - 150
2,4,5-T	74.5		P	40 - 150
Acetaminophen	65.9		P	30 - 150
Acetamiprid	102		P	40 - 150
Afidopyropen	99.0		P	40 - 150
Bentazon	93.7		P	30 - 150
Benzovindiflupyr	101		P	40 - 150
Carbamazepine	115		P	40 - 150
Clothianidin	104		P	40 - 150
Dinotefuran	101		P	40 - 150
Diuron	76.7		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	95.3		P	40 - 150
Hydrocodone	97.9		P	40 - 150
Ibuprofen	108		P	40 - 150
Imazapyr	107		P	40 - 150
Imidacloprid	94.3		P	40 - 150
Linuron	78.3		P	40 - 150
Mandestrobin	108		P	40 - 150
MCPP	110		P	40 - 150
Naproxen	81.0		P	40 - 150
Primidone	116		P	40 - 150
Pyraclostrobin	86.0		P	40 - 150
Thiamethoxam	113		P	40 - 150
Tolfenpyrad	48.5		P	30 - 150
Triclopyr	71.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P412352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	86.5		P	40 - 150
AMPA	99.5		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	109		P	40 - 150
Glyphosate	127		P	40 - 150
Sucralose	78.2		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P412679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P412683

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318392	Barium	101	102	P/P	80 - 120
2318392	Calcium	106		P	80 - 120
2318392	Iron	108	108	P/P	80 - 120
2318392	Magnesium	108	107	P/P	80 - 120
2318392	Manganese	103	104	P/P	80 - 120
2318392	Potassium	106	105	P/P	80 - 120
2318392	Sodium	105		P	80 - 120
2318392	Zinc	96.3	97.9	P/P	80 - 120
2318567	Barium	103		P	80 - 120
2318567	Calcium	103		P	80 - 120
2318567	Iron	102		P	80 - 120
2318567	Magnesium	108		P	80 - 120
2318567	Manganese	105		P	80 - 120
2318567	Potassium	108		P	80 - 120
2318567	Sodium	108		P	80 - 120
2318567	Zinc	98.5		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318392	Aluminum	105	102	P/P	80 - 120
2318392	Antimony	106	106	P/P	80 - 120
2318392	Arsenic	105	104	P/P	80 - 120
2318392	Beryllium	100	99.3	P/P	80 - 120
2318392	Boron	106	105	P/P	80 - 120
2318392	Cadmium	105	107	P/P	80 - 120
2318392	Chromium	103	102	P/P	80 - 120
2318392	Copper	100	98.9	P/P	80 - 120
2318392	Lead	106	105	P/P	80 - 120
2318392	Nickel	101	100	P/P	80 - 120
2318392	Selenium	100	101	P/P	80 - 120
2318392	Silver	105	103	P/P	80 - 120
2318392	Thallium	111	111	P/P	80 - 120
2318567	Aluminum	104		P	80 - 120
2318567	Antimony	107		P	80 - 120
2318567	Arsenic	106		P	80 - 120
2318567	Beryllium	104		P	80 - 120
2318567	Boron	110		P	80 - 120
2318567	Cadmium	104		P	80 - 120
2318567	Copper	98.4		P	80 - 120
2318567	Lead	106		P	80 - 120
2318567	Nickel	101		P	80 - 120
2318567	Selenium	103		P	80 - 120
2318567	Silver	105		P	80 - 120
2318567	Thallium	110		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318059	Chloride	96.7		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318224	Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318059	Sulfate	96.9		P	90 - 110
2318224	Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318227	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318562	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318386	NO2NO3-N	96.2	96.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318506	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318293	O-Phosphate-P	97.5	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P412269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318871	Acetochlor	100	113	P/P	65 - 124
2318871	Alachlor	94.4	109	P/P	61 - 121
2318871	Ametryn	132	126	P/P	52 - 216
2318871	Atrazine Desethyl	43.6	51.0	P/P	15 - 160
2318871	Avobenzone	85.1	92.0	P/P	59 - 206
2318871	Azinphos Methyl	106	99.2	P/P	40 - 292
2318871	Azoxystrobin	118	126	P/P	12 - 242
2318871	Bromacil	68.9	100	P/P	54 - 167
2318871	Butylate	50.3	41.4	P/P	14 - 94.0

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318871	Caffeine	85.9	85.4	P/P	10 - 226
2318871	Carbophenothion	70.1	54.7	P/P	49 - 122
2318871	Carfentrazone Ethyl	123	116	P/P	53 - 138
2318871	Chlorfenapyr	59.9	64.6	P/P	50 - 150
2318871	Chlorpyrifos Ethyl	77.5	91.3	P/P	52 - 122
2318871	Chlorpyrifos Methyl	74.1	95.2	P/P	66 - 117
2318871	Coumaphos	161	166	P/P	50 - 220
2318871	Cyanazine	58.7	70.1	P/P	43 - 245
2318871	Cyprodinil	68.7	92.8	P/P	50 - 150
2318871	Demeton	65.7	76.6	P/P	43 - 188
2318871	Diazinon	69.6	81.2	P/P	69 - 131
2318871	Difenoconazole	101	105	P/P	34 - 231
2318871	Dimethenamid	73.2	87.0	P/P	55 - 118
2318871	Dimethomorph	179	158	F/F	50 - 150
2318871	Disulfoton	63.3	74.4	P/P	38 - 141
2318871	Dithiopyr	90.2	80.9	P/P	42 - 116
2318871	EPTC	54.8	49.7	P/P	18 - 85.0
2318871	Ethion	45.3	30.3	P/P	10 - 131
2318871	Ethoprop	83.3	87.8	P/P	65 - 129
2318871	Etridiazole	58.1	62.9	P/P	50 - 150
2318871	Fenamiphos	69.4	61.7	P/P	31 - 137
2318871	Fenbuconazole	79.9	92.0	P/P	57 - 160
2318871	Fipronil	72.3	73.0	P/P	62 - 132
2318871	Fipronil Desulfinyl	125	111	P/P	57 - 131
2318871	Fipronil Sulfide	50.4	50.1	P/P	15 - 138
2318871	Fipronil Sulfone	60.9	63.7	P/P	21 - 134
2318871	Fluazifop-P-butyl	57.9	72.6	P/P	54 - 133
2318871	Fludioxonil	70.0	86.3	P/P	58 - 127
2318871	Flumioxazin	121	105	P/P	33 - 300
2318871	Flutolanil	70.8	76.0	P/P	42 - 130
2318871	Fluxapyroxad	61.7	75.8	P/P	23 - 141
2318871	Fonofos	91.8	92.1	P/P	58 - 119
2318871	Hexazinone	105	113	P/P	68 - 172
2318871	Imazalil	80.0	75.8	P/P	48 - 283
2318871	Iprodione	73.5	87.7	P/P	38 - 140
2318871	Loratadine	147	145	P/P	50 - 150
2318871	Malathion	77.2	93.8	P/P	40 - 137
2318871	Metalaxyl	71.8	102	P/P	21 - 129
2318871	Metolachlor	96.1	119	P/P	55 - 122
2318871	Metribuzin	93.6	90.9	P/P	38 - 187
2318871	Mevinphos	66.1	63.9	P/P	54 - 134
2318871	Molinate	74.2	75.2	P/P	41 - 97.0
2318871	Myclobutanil	71.6	86.8	P/P	56 - 125
2318871	Naled	77.9	86.8	P/P	10 - 108
2318871	Napropamide	53.5	58.1	P/P	50 - 150
2318871	Norflurazon	115	113	P/P	32 - 122
2318871	Octinoxate	74.6	80.6	P/P	25 - 150
2318871	Oxadiazon	66.3	76.7	P/P	40 - 119
2318871	Oxybenzone	70.2	82.5	P/P	59 - 147
2318871	Oxyfluorfen	89.8	103	P/P	61 - 153
2318871	Parathion Ethyl	107	97.1	P/P	59 - 130
2318871	Parathion Methyl	105	99.4	P/P	65 - 155

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318871	Pendimethalin	111	96.1	P/P	49 - 138
2318871	Phenytoin	4.46	17.5	F/F	50 - 200
2318871	Phorate	99.8	95.3	P/P	54 - 161
2318871	Prodiamine	213	117	F/P	33 - 161
2318871	Prometon	94.5	89.3	P/P	48 - 140
2318871	Prometryn	109	98.7	P/P	55 - 134
2318871	Pronamide	80.8	101	P/P	66 - 137
2318871	Propanil	121	117	P/P	50 - 150
2318871	Propargite	91.6	87.0	P/P	50 - 200
2318871	Propiconazole	109	96.8	P/P	36 - 150
2318871	Pyraflufen Ethyl	105	84.8	P/P	50 - 150
2318871	Pyridaben	53.7	54.2	P/P	50 - 200
2318871	Pyriproxyfen	78.7	88.3	P/P	10 - 165
2318871	Simazine	95.2	79.5	P/P	57 - 145
2318871	Stirophos	89.5	83.1	P/P	50 - 150
2318871	Sulfentrazone	71.1	73.7	P/P	34 - 140
2318871	Tebuconazole	92.0	82.1	P/P	10 - 127
2318871	Terbufos	82.2	92.1	P/P	59 - 138
2318871	Terbuthylazine	71.0	76.2	P/P	68 - 119
2318871	Thiobencarb	83.0	97.2	P/P	50 - 150
2318871	Triadimefon	71.0	81.0	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P412254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318087	2,4-D	77.0	93.1	P/P	40 - 150
2318087	2,4,5-T	72.1	75.2	P/P	40 - 150
2318087	Acetaminophen	102	97.5	P/P	30 - 150
2318087	Acetamiprid	85.8	74.4	P/P	40 - 150
2318087	Afidopyropen	80.8	74.7	P/P	40 - 150
2318087	Bentazon	81.3	79.8	P/P	30 - 150
2318087	Benzovindiflupyr	108	98.8	P/P	40 - 150
2318087	Carbamazepine	112	110	P/P	40 - 150
2318087	Clothianidin	95.4	96.2	P/P	40 - 150
2318087	Dinotefuran	112	110	P/P	40 - 150
2318087	Diuron	94.1	93.8	P/P	40 - 150
2318087	Fenuron	142	156	P/F	40 - 150
2318087	Fluridone	93.2	91.5	P/P	40 - 150
2318087	Hydrocodone	94.9	104	P/P	40 - 150
2318087	Ibuprofen	127	130	P/P	40 - 150
2318087	Imazapyr	102	90.8	P/P	40 - 150
2318087	Imidacloprid	115	98.9	P/P	40 - 150
2318087	Linuron	75.8	59.2	P/P	40 - 150
2318087	Mandestrobin	93.0	101	P/P	40 - 150
2318087	MCPP	115	94.7	P/P	40 - 150
2318087	Naproxen	70.5	55.6	P/P	40 - 150
2318087	Primidone	140	138	P/P	40 - 150
2318087	Pyraclostrobin	87.1	86.0	P/P	40 - 150
2318087	Thiamethoxam	116	115	P/P	40 - 150
2318087	Tolfenpyrad	45.0	46.8	P/P	30 - 150
2318087	Triclopyr	74.1	65.8	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P412352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318391	Acesulfame K	95.8	101	P/P	40 - 150
2318391	AMPA	80.2	91.9	P/P	40 - 150
2318391	Endothall	115	122	P/P	40 - 150
2318391	Glufosinate	110	112	P/P	40 - 150
2318391	Glyphosate	101	117	P/P	40 - 150
2318391	Sucralose	74.2	81.7	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P412683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319288	Fluoride	98.4	96.8	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P412476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318688	Organic Carbon	96.3	99.2	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318385	Color (true)	0.454	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318385	Turbidity	7.81	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318392	Barium	1.49	Spike	P	0 - 20
2318392	Calcium	0.844	Spike	P	0 - 20
2318392	Iron	0.225	Spike	P	0 - 20
2318392	Magnesium	0.267	Spike	P	0 - 20
2318392	Manganese	1.34	Spike	P	0 - 20
2318392	Potassium	0.909	Spike	P	0 - 20
2318392	Sodium	0.801	Spike	P	0 - 20
2318392	Zinc	1.62	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318392	Aluminum	1.87	Spike	P	0 - 20
2318392	Antimony	0.101	Spike	P	0 - 20
2318392	Arsenic	0.411	Spike	P	0 - 20
2318392	Beryllium	0.966	Spike	P	0 - 20
2318392	Boron	0.864	Spike	P	0 - 20
2318392	Cadmium	2.52	Spike	P	0 - 20
2318392	Chromium	0.880	Spike	P	0 - 20
2318392	Copper	1.30	Spike	P	0 - 20
2318392	Lead	1.08	Spike	P	0 - 20
2318392	Nickel	0.999	Spike	P	0 - 20
2318392	Selenium	0.795	Spike	P	0 - 20
2318392	Silver	2.01	Spike	P	0 - 20
2318392	Thallium	0.287	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318059	Chloride	0.216	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318059	Sulfate	0.407	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318227	Ammonia-N	0.710	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318562	Kjeldahl Nitrogen	0.469	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318386	NO2NO3-N	0.375	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318506	Total-P	1.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318293	O-Phosphate-P	2.30	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P412269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318871	Acetochlor	11.8	Spike	P	0 - 27
2318871	Alachlor	14.2	Spike	P	0 - 27
2318871	Ametryn	4.70	Spike	P	0 - 34
2318871	Atrazine	5.73	Spike	P	0 - 41
2318871	Atrazine Desethyl	10.3	Spike	P	0 - 38
2318871	Avobenzone	7.73	Spike	P	0 - 30
2318871	Azinphos Methyl	6.45	Spike	P	0 - 62
2318871	Azoxystrobin	5.72	Spike	P	0 - 32
2318871	Bromacil	29.7	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P412269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318871	Butylate	19.3	Spike	P	0 - 59
2318871	Caffeine	0.662	Spike	P	0 - 60
2318871	Carbophenothion	24.6	Spike	P	0 - 25
2318871	Carfentrazone Ethyl	6.27	Spike	P	0 - 26
2318871	Chlorfenapyr	7.51	Spike	P	0 - 30
2318871	Chlorpyrifos Ethyl	16.4	Spike	P	0 - 27
2318871	Chlorpyrifos Methyl	25.0	Spike	P	0 - 26
2318871	Coumaphos	3.28	Spike	P	0 - 30
2318871	Cyanazine	17.7	Spike	P	0 - 58
2318871	Cyprodinil	29.9	Spike	P	0 - 30
2318871	Demeton	15.3	Spike	P	0 - 25
2318871	Diazinon	15.3	Spike	P	0 - 29
2318871	Difenoconazole	4.46	Spike	P	0 - 25
2318871	Dimethenamid	17.2	Spike	P	0 - 30
2318871	Dimethomorph	12.4	Spike	P	0 - 30
2318871	Disulfoton	16.1	Spike	P	0 - 33
2318871	Dithiopyr	10.9	Spike	P	0 - 22
2318871	EPTC	9.88	Spike	P	0 - 38
2318871	Ethion	39.8	Spike	P	0 - 79
2318871	Ethoprop	5.28	Spike	P	0 - 23
2318871	Etridiazole	7.93	Spike	P	0 - 30
2318871	Fenamiphos	11.7	Spike	P	0 - 58
2318871	Fenbuconazole	14.2	Spike	P	0 - 37
2318871	Fipronil	0.934	Spike	P	0 - 33
2318871	Fipronil Desulfinyl	11.8	Spike	P	0 - 26
2318871	Fipronil Sulfide	0.580	Spike	P	0 - 37
2318871	Fipronil Sulfone	4.42	Spike	P	0 - 50
2318871	Fluazifop-P-butyl	22.6	Spike	P	0 - 24
2318871	Fludioxonil	20.9	Spike	P	0 - 26
2318871	Flumioxazin	13.4	Spike	P	0 - 37
2318871	Flutolanil	7.09	Spike	P	0 - 26
2318871	Fluxapyroxad	20.4	Spike	P	0 - 34
2318871	Fonofos	0.386	Spike	P	0 - 27
2318871	Hexazinone	6.91	Spike	P	0 - 36
2318871	Imazalil	5.35	Spike	P	0 - 65
2318871	Iprodione	17.7	Spike	P	0 - 33
2318871	Loratadine	1.88	Spike	P	0 - 30
2318871	Malathion	19.4	Spike	P	0 - 44
2318871	Metalaxyl	32.3	Spike	P	0 - 38
2318871	Metolachlor	18.2	Spike	P	0 - 36
2318871	Metribuzin	2.91	Spike	P	0 - 63
2318871	Mevinphos	3.27	Spike	P	0 - 26
2318871	Molinate	1.33	Spike	P	0 - 40
2318871	Myclobutanil	19.1	Spike	P	0 - 21
2318871	Naled	10.8	Spike	P	0 - 26
2318871	Napropamide	8.26	Spike	P	0 - 30
2318871	Norflurazon	1.05	Spike	P	0 - 24
2318871	Octinoxate	7.63	Spike	P	0 - 30
2318871	Oxadiazon	13.0	Spike	P	0 - 27
2318871	Oxybenzone	16.1	Spike	P	0 - 30
2318871	Oxyfluorfen	13.2	Spike	P	0 - 24

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P412269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318871	Parathion Ethyl	9.97	Spike	P	0 - 28
2318871	Parathion Methyl	5.39	Spike	P	0 - 27
2318871	Pendimethalin	13.9	Spike	P	0 - 31
2318871	Phenytoin	119	Spike	F	0 - 30
2318871	Phorate	4.56	Spike	P	0 - 27
2318871	Prodiamine	58.3	Spike	F	0 - 52
2318871	Prometon	5.66	Spike	P	0 - 31
2318871	Prometryn	9.58	Spike	P	0 - 28
2318871	Pronamide	22.3	Spike	P	0 - 26
2318871	Propanil	2.70	Spike	P	0 - 30
2318871	Propargite	5.18	Spike	P	0 - 30
2318871	Propiconazole	12.3	Spike	P	0 - 31
2318871	Pyraflufen Ethyl	20.9	Spike	P	0 - 30
2318871	Pyridaben	0.855	Spike	P	0 - 30
2318871	Pyriproxyfen	11.5	Spike	P	0 - 50
2318871	Simazine	10.3	Spike	P	0 - 29
2318871	Stirophos	7.39	Spike	P	0 - 30
2318871	Sulfentrazone	3.20	Spike	P	0 - 33
2318871	Tebuconazole	11.3	Spike	P	0 - 44
2318871	Terbufos	11.4	Spike	P	0 - 29
2318871	Terbuthylazine	7.04	Spike	P	0 - 27
2318871	Thiobencarb	15.7	Spike	P	0 - 30
2318871	Triadimefon	13.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318087	2,4-D	19.0	Spike	P	0 - 30
2318087	2,4,5-T	4.17	Spike	P	0 - 30
2318087	Acetaminophen	4.53	Spike	P	0 - 30
2318087	Acetamiprid	14.3	Spike	P	0 - 30
2318087	Afidopyropen	7.90	Spike	P	0 - 30
2318087	Bentazon	1.89	Spike	P	0 - 30
2318087	Benzovindiflupyr	8.82	Spike	P	0 - 30
2318087	Carbamazepine	2.45	Spike	P	0 - 30
2318087	Clothianidin	0.793	Spike	P	0 - 30
2318087	Dinotefuran	1.89	Spike	P	0 - 30
2318087	Diuron	0.255	Spike	P	0 - 30
2318087	Fenuron	9.54	Spike	P	0 - 30
2318087	Fluridone	1.85	Spike	P	0 - 30
2318087	Hydrocodone	8.98	Spike	P	0 - 30
2318087	Ibuprofen	1.80	Spike	P	0 - 30
2318087	Imazapyr	11.2	Spike	P	0 - 30
2318087	Imidacloprid	14.9	Spike	P	0 - 30
2318087	Linuron	24.7	Spike	P	0 - 30
2318087	Mandestrobin	8.33	Spike	P	0 - 30
2318087	MCPP	19.7	Spike	P	0 - 30
2318087	Naproxen	23.6	Spike	P	0 - 30
2318087	Primidone	1.73	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P412254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318087	Pyraclostrobin	1.32	Spike	P	0 - 30
2318087	Thiamethoxam	0.550	Spike	P	0 - 30
2318087	Tolfenpyrad	3.91	Spike	P	0 - 30
2318087	Triclopyr	11.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318391	Acesulfame K	4.94	Spike	P	0 - 30
2318391	AMPA	12.5	Spike	P	0 - 30
2318391	Endothall	5.70	Spike	P	0 - 30
2318391	Glufosinate	1.81	Spike	P	0 - 30
2318391	Glyphosate	14.5	Spike	P	0 - 30
2318391	Sucralose	9.25	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P412679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319288	Total Alkalinity	0.409	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P412662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318385	TDS	2.51	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P412683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319288	Fluoride	1.50	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318688	Organic Carbon	2.26	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2318391
Field Sample ID: G1NE0949

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	139	P	30 - 160
EPA 8321B	Diuron-d6	80.8	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	127	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	88.6	P	30 - 160

Lab Sample ID: 2318393
Field Sample ID: G1NE0949

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	50.3	P	20 - 200
EPA 8270E	Simazine-d10	75.7	P	71 - 140
EPA 8270E	Terbufos-d10	70.1	P	62 - 131
EPA 8270E	Terphenyl-d14	72.7	P	50 - 124

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A111431
Included Lab Sample IDs: 2318387

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A111434
Included Lab Sample IDs: 2318385

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

Reference Method: DEP SOP: NU-094-1
Run ID: A111435
Included Lab Sample IDs: 2318385

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A111443
Included Lab Sample IDs: 2318385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.5	97.7	P/P	90 - 110
Sulfate	98.9	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A111459
Included Lab Sample IDs: 2318386

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A111476
Included Lab Sample IDs: 2318386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111511
Included Lab Sample IDs: 2318392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	107	P/P	90 - 110
Antimony	105	106	P/P	90 - 110
Arsenic	104	104	P/P	90 - 110
Beryllium	102	102	P/P	90 - 110
Cadmium	104	106	P/P	90 - 110
Chromium	101	103	P/P	90 - 110
Copper	102	103	P/P	90 - 110
Lead	102	104	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111511
Included Lab Sample IDs: 2318392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	102	103	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Silver	104	107	P/P	90 - 110
Thallium	104	105	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A111518
Included Lab Sample IDs: 2318386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A111537
Included Lab Sample IDs: 2318392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	95.3	99.3	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A111564
Included Lab Sample IDs: 2318393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	92.3		P	80 - 120
Alachlor	106		P	80 - 120
Ametryn	110		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Azoxystrobin	98.9		P	80 - 120
Bromacil	109		P	80 - 120
Butylate	109		P	80 - 120
Caffeine	112		P	80 - 120
Carbophenothion	106		P	80 - 120
Carfentrazone Ethyl	118		P	80 - 120
Chlorfenapyr	98.1		P	80 - 120
Chlorpyrifos Ethyl	91.9		P	80 - 120
Chlorpyrifos Methyl	94.7		P	80 - 120
Coumaphos	99.1		P	80 - 120
Cyanazine	93.1		P	80 - 120
Cyprodinil	99.4		P	80 - 120
Demeton	95.0		P	80 - 120
Diazinon	108		P	80 - 120
Difenoconazole	100		P	80 - 120
Dimethenamid	97.3		P	80 - 120
Dimethomorph	101		P	80 - 120
Disulfoton	97.6		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	108		P	80 - 120
Ethion	106		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A111564
Included Lab Sample IDs: 2318393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	98.4		P	80 - 120
Etridiazole	95.0		P	80 - 120
Fenamiphos	103		P	80 - 120
Fenbuconazole	96.4		P	80 - 120
Fipronil	96.5		P	80 - 120
Fipronil Desulfinyl	113		P	80 - 120
Fipronil Sulfide	90.2		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	106		P	80 - 120
Fludioxonil	101		P	80 - 120
Flumioxazin	112		P	80 - 120
Flutolanil	108		P	80 - 120
Fluxapyroxad	106		P	80 - 120
Fonofos	98.0		P	80 - 120
Hexazinone	106		P	80 - 120
Imazalil	106		P	80 - 120
Iprodione	110		P	80 - 120
Loratadine	102		P	80 - 120
Malathion	96.1		P	80 - 120
Metalaxyl	96.8		P	80 - 120
Metolachlor	95.9		P	80 - 120
Metribuzin	88.3		P	80 - 120
Mevinphos	92.3		P	80 - 120
Molinate	112		P	80 - 120
Myclobutanil	105		P	80 - 120
Naled	91.0		P	80 - 120
Napropamide	109		P	80 - 120
Norflurazon	106		P	80 - 120
Oxyfluorfen	110		P	80 - 120
Parathion Ethyl	95.4		P	80 - 120
Parathion Methyl	95.8		P	80 - 120
Pendimethalin	96.7		P	80 - 120
Phenytoin	98.6		P	80 - 120
Phorate	86.9		P	80 - 120
Prodiamine	114		P	80 - 120
Prometon	95.2		P	80 - 120
Prometryn	105		P	80 - 120
Pronamide	101		P	80 - 120
Propanil	101		P	80 - 120
Propargite	109		P	80 - 120
Propiconazole	109		P	80 - 120
Pyraflufen Ethyl	108		P	80 - 120
Pyridaben	106		P	80 - 120
Pyriproxyfen	105		P	80 - 120
Simazine	94.2		P	80 - 120
Stirophos	106		P	80 - 120
Sulfentrazone	98.9		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	97.5		P	80 - 120
Terbuthylazine	100		P	80 - 120
Thiobencarb	99.6		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A111564
Included Lab Sample IDs: 2318393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triadimefon	89.9		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111583
Included Lab Sample IDs: 2318392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.8	99.4	P/P	90 - 110
Calcium	102	103	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	102	103	P/P	90 - 110
Manganese	101	102	P/P	90 - 110
Potassium	104	106	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Zinc	97.1	98.1	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A111591
Included Lab Sample IDs: 2318385

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

Reference Method: SM 4500-F- C-2011
Run ID: A111591
Included Lab Sample IDs: 2318385

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

Reference Method: EPA 8321B
Run ID: A111604
Included Lab Sample IDs: 2318391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.5	88.7	P/P	60 - 160
Sucralose	78.7	76.5	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A111607
Included Lab Sample IDs: 2318391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	76.2	79.6	P/P	60 - 160
Endothall	102	100	P/P	60 - 160
Glufosinate	95.8	93.2	P/P	60 - 160
Glyphosate	108	109	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111611
Included Lab Sample IDs: 2318386

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

Reference Method: EPA 8270E
Run ID: A111635
Included Lab Sample IDs: 2318393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	90.5		P	80 - 120
Octinoxate	91.4		P	80 - 120
Oxybenzone	97.7		P	80 - 120

Reference Method: EPA 8321B
Run ID: A111642
Included Lab Sample IDs: 2318391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	107	P/P	50 - 150
2,4,5-T	128	109	P/P	50 - 150
Acetaminophen	99.5	87.4	P/P	60 - 160
Acetamiprid	96.8	104	P/P	50 - 150
Afidopyropen	110	110	P/P	50 - 150
Bentazon	112	111	P/P	50 - 160
Benzovindiflupyr	105	94.0	P/P	50 - 150
Carbamazepine	111	92.6	P/P	60 - 150
Clothianidin	75.3	64.5	P/P	60 - 150
Dinotefuran	102	100	P/P	50 - 150
Diuron	125	99.3	P/P	60 - 160
Fenuron	88.9	87.0	P/P	60 - 150
Fluridone	95.3	95.0	P/P	60 - 160
Hydrocodone	101	102	P/P	60 - 150
Ibuprofen	137	128	P/P	50 - 160
Imazapyr	125	142	P/P	50 - 150
Imidacloprid	94.8	93.3	P/P	60 - 150
Linuron	60.7	134	P/P	60 - 150
Mandestrobin	97.4	103	P/P	50 - 150
MCPP	111	114	P/P	50 - 150
Naproxen	66.0	148	P/P	50 - 160
Primidone	87.4	147	P/P	60 - 150
Pyraclostrobin	99.8	107	P/P	60 - 150
Thiamethoxam	90.9	92.2	P/P	50 - 150
Tolfenpyrad	105	111	P/P	60 - 150
Triclopyr	105	119	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A111674
Included Lab Sample IDs: 2318386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	108	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A111718
Included Lab Sample IDs: 2318393

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	92.3		P	80 - 120

* 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		
						LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	102					0.454	
EPA 180.1 Rev. 2.0	Turbidity	96.3					7.81	
EPA 200.7 Rev. 4.4	Barium	102	101	102	103			1.49
	Calcium	106	106	103				0.844
	Iron	107	108	108	102			0.225
	Magnesium	108	108	107	108			0.267
	Manganese	104	103	104	105			1.34
	Potassium	105	106	105	108			0.909
	Sodium	105	105	108				0.801
	Zinc	97.8	96.3	97.9	98.5			1.62
EPA 200.8 Rev. 5.4	Aluminum	104	104	105	102			1.87
	Antimony	104	107	106	106			0.101
	Arsenic	105	106	105	104			0.411
	Beryllium	104	104	100	99.3			0.966
	Boron	109	106	105	110			0.864
	Cadmium	103	104	105	107			2.52
	Chromium	101	103	102				0.880
	Copper	101	98.4	100	98.9			1.30
	Lead	104	106	106	105			1.08
	Nickel	104	101	101	100			0.999
	Selenium	101	103	100	101			0.795
	Silver	104	105	105	103			2.01
	Thallium	107	110	111	111			0.287
EPA 300.0 Rev. 2.1	Chloride	98.1	96.7	99.6			0.216	
	Sulfate	98.6	96.9	99.7			0.407	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	103	102				0.710
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	106	106				0.469
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	96.2	96.7				0.375
EPA 365.1 Rev. 2.0	Total-P	98.2	101	102				1.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.5	100				2.30
EPA 8270E	Acetochlor	87.7	100	113				11.8
	Alachlor	92.3	94.4	109				14.2
	Ametryn	103	132	126				4.70
	Atrazine	105						5.73
	Atrazine Desethyl	64.9	43.6	51.0				10.3
	Avobenzone	91.4	85.1	92.0				7.73
	Azinphos Methyl	107	106	99.2				6.45
	Azoxystrobin	142	118	126				5.72
	Bromacil	66.7	68.9	100				29.7
	Butylate	74.3	50.3	41.4				19.3
	Caffeine	76.0	85.9	85.4				0.662
	Carbophenothion	119	70.1	54.7				24.6
	Carfentrazone Ethyl	129	123	116				6.27
	Chlorfenapyr	122	59.9	64.6				7.51
	Chlorpyrifos Ethyl	86.3	77.5	91.3				16.4
	Chlorpyrifos Methyl	71.6	74.1	95.2				25.0
	Coumaphos	65.0	161	166				3.28
	Cyanazine	179	58.7	70.1				17.7
	Cyprodinil	59.0	68.7	92.8				29.9
	Demeton	71.4	65.7	76.6				15.3
	Diazinon	72.4	69.6	81.2				15.3
	Difenoconazole	62.8	101	105				4.46
	Dimethenamid	69.6	73.2	87.0				17.2
	Dimethomorph	170	179	158				12.4

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Disulfoton	72.2	63.3	74.4			16.1
	Dithiopyr	86.8	90.2	80.9			10.9
	EPTC	61.6	54.8	49.7			9.88
	Ethion	36.3	45.3	30.3			39.8
	Ethoprop	104	83.3	87.8			5.28
	Etridiazole	69.2	58.1	62.9			7.93
	Fenamiphos	71.8	69.4	61.7			11.7
	Fenbuconazole	84.1	79.9	92.0			14.2
	Fipronil	67.8	72.3	73.0			0.934
	Fipronil Desulfinyl	118	111	125			11.8
	Fipronil Sulfide	113	50.4	50.1			0.580
	Fipronil Sulfone	116	60.9	63.7			4.42
	Fluazifop-P-butyl	110	57.9	72.6			22.6
	Fludioxonil	126	70.0	86.3			20.9
	Flumioxazin	62.2	121	105			13.4
	Flutolanil	71.1	70.8	76.0			7.09
	Fluxapyroxad	59.6	61.7	75.8			20.4
	Fonofos	70.1	91.8	92.1			0.386
	Hexazinone	80.1	105	113			6.91
	Imazalil	47.7	80.0	75.8			5.35
	Iprodione	70.8	73.5	87.7			17.7
	Loratadine	220	147	145			1.88
	Malathion	77.3	77.2	93.8			19.4
	Metalaxyl	57.8	71.8	102			32.3
	Metolachlor	78.0	96.1	119			18.2
	Metribuzin	89.1	93.6	90.9			2.91
	Mevinphos	80.7	66.1	63.9			3.27
	Molinate	60.0	74.2	75.2			1.33
	Myclobutanil	66.1	71.6	86.8			19.1
	Naled	75.6	77.9	86.8			10.8
	Napropamide	53.2	53.5	58.1			8.26
	Norflurazon	110	115	113			1.05
	Octinoxate	85.2	74.6	80.6			7.63
	Oxadiazon	65.2	66.3	76.7			13.0
	Oxybenzone	77.1	70.2	82.5			16.1
	Oxyfluorfen	76.6	89.8	103			13.2
	Parathion Ethyl	98.3	107	97.1			9.97
	Parathion Methyl	86.2	105	99.4			5.39
	Pendimethalin	78.5	111	96.1			13.9
	Phenytoin	15.6	4.46	17.5			119
	Phorate	83.5	99.8	95.3			4.56
	Prodiamine	31.8	213	117			58.3
	Prometon	74.2	94.5	89.3			5.66
	Prometryn	95.6	109	98.7			9.58
	Pronamide	100	80.8	101			22.3
	Propanil	85.5	121	117			2.70
	Propargite	90.0	91.6	87.0			5.18
	Propiconazole	109	109	96.8			12.3
	Pyraflufen Ethyl	108	105	84.8			20.9
	Pyridaben	71.3	53.7	54.2			0.855
	Pyriproxyfen	78.5	78.7	88.3			11.5
	Simazine	98.3	95.2	79.5			10.3
	Stirophos	35.9	89.5	83.1			7.39
	Sulfentrazone	48.7	71.1	73.7			3.20

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Tebuconazole	15.3	92.0	82.1			11.3
	Terbufos	105	82.2	92.1			11.4
	Terbuthylazine	75.8	71.0	76.2			7.04
	Thiobencarb	76.7	83.0	97.2			15.7
	Triadimefon	100	71.0	81.0			13.1
EPA 8321B	2,4-D	98.5	77.0	93.1			19.0
	2,4,5-T	74.5	72.1	75.2			4.17
	Acesulfame K	86.5	95.8	101			4.94
	Acetaminophen	65.9	102	97.5			4.53
	Acetamiprid	102	85.8	74.4			14.3
	Afidopyropen	99.0	80.8	74.7			7.90
	AMPA	99.5	80.2	91.9			12.5
	Bentazon	93.7	81.3	79.8			1.89
	Benzovindiflupyr	101	108	98.8			8.82
	Carbamazepine	115	112	110			2.45
	Clothianidin	104	95.4	96.2			0.793
	Dinotefuran	101	112	110			1.89
	Diuron	76.7	94.1	93.8			0.255
	Endothall	114	115	122			5.70
	Fenuron	114	142	156			9.54
	Fluridone	95.3	93.2	91.5			1.85
	Glufosinate	109	110	112			1.81
	Glyphosate	127	101	117			14.5
	Hydrocodone	97.9	94.9	104			8.98
	Ibuprofen	108	127	130			1.80
	Imazapyr	107	102	90.8			11.2
	Imidacloprid	94.3	115	98.9			14.9
	Linuron	78.3	75.8	59.2			24.7
	Mandestrobin	108	93.0	101			8.33
	MCPP	110	115	94.7			19.7
	Naproxen	81.0	70.5	55.6			23.6
	Primidone	116	140	138			1.73
	Pyraclostrobin	86.0	87.1	86.0			1.32
	Sucralose	78.2	74.2	81.7			9.25
	Thiamethoxam	113	116	115			0.550
	Tolfenpyrad	48.5	45.0	46.8			3.91
	Triclopyr	71.2	74.1	65.8			11.9
SM 2320 B-2011	Total Alkalinity	98.1				0.409	
SM 2540 C-2011	TDS					2.51	
SM 4500-F- C-2011	Fluoride	98.5	98.4	96.8			1.50
SM 5310 B-2011	Organic Carbon	96.5	96.3	99.2			2.26

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2318385
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2318385
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2318392
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2318392
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2318385
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2318385

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2318386
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2318386
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2318386
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2318386
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2318387
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2318393
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2318393
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2318391
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2318385
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2318392
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2318385
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2318385
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2318385
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2318386

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	04/12/2022			04/12/2022 16:03	Anna M. Plaviak	2318385
EPA 180.1 Rev. 2.0	04/12/2022			04/12/2022 14:27	Khloe J Berg	2318385
EPA 200.7 Rev. 4.4	04/12/2022	04/14/2022 10:32	Megan Whitefoot	04/21/2022 00:11	Josef B Mick	2318392
EPA 200.8 Rev. 5.4	04/12/2022	04/14/2022 10:32	Megan Whitefoot	04/15/2022 16:24	Alexander Thompson	2318392
	04/12/2022	04/14/2022 10:32	Megan Whitefoot	04/18/2022 12:42	Alexander Thompson	2318392
EPA 300.0 Rev. 2.1	04/12/2022			04/15/2022 16:34	Anna M. Plaviak	2318385
EPA 350.1 Rev. 2.0	04/12/2022			04/14/2022 14:52	Judith K. Clark	2318386
EPA 351.2 Rev. 2.0	04/12/2022	04/22/2022 08:58	Samantha L Bates	04/25/2022 15:15	Samantha L Bates	2318386
EPA 353.2 Rev. 2.0	04/12/2022			04/13/2022 16:16	Nathaniel J Jones	2318386
EPA 365.1 Rev. 2.0	04/12/2022	04/19/2022 14:35	Simonne.V. Calhoun	04/21/2022 14:49	James L Waggerby	2318386
EPA 365.1 Rev. 2.0 dissolved	04/12/2022			04/12/2022 14:42	James L Waggerby	2318387
EPA 8270E	04/12/2022	04/15/2022 08:00	Fe-Val Siddell	04/18/2022 21:33	Michael Poppell	2318393
	04/12/2022	04/15/2022 08:00	Fe-Val Siddell	04/21/2022 19:29	Lipi Saha	2318393
	04/12/2022	04/15/2022 08:00	Fe-Val Siddell	04/25/2022 21:14	Michael Poppell	2318393
EPA 8321B	04/12/2022	04/14/2022 08:30	June Rhew	04/16/2022 00:50	Juyoung Kim	2318391
	04/12/2022	04/14/2022 11:00	Manjita Shrestha	04/15/2022 11:34	Manjita Shrestha	2318391
	04/12/2022	04/14/2022 11:00	Manjita Shrestha	04/16/2022 03:04	Manjita Shrestha	2318391
SM 2320 B-2011	04/12/2022			04/20/2022 08:04	Dale L. Simmons	2318385
SM 2340 B-2011	04/12/2022			04/21/2022 00:11	Josef B Mick	2318392
SM 2540 C-2011	04/12/2022			04/13/2022 14:02	Yijie Li	2318385
SM 2540 D-2011	04/12/2022			04/13/2022 14:26	Yijie Li	2318385
SM 4500-F- C-2011	04/12/2022			04/20/2022 08:04	Dale L. Simmons	2318385
SM 5310 B-2011	04/12/2022			04/15/2022 16:14	Judith K. Clark	2318386