Chemical Analysis Report

CEN-DIST-2022-02-09-02

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

Event Description: **Canoe Creek - SCI**
Request ID: **RQ-2022-01-17-26**
Customer: **CEN-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 02-MAR-2022 09:00

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: Canoe Creek at SR 523 bridge **Collection Date/Time: 02/08/2022 10:50**

Field ID: G4CE0220 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304568	DEP SOP: NU-094-1	Color (true)**	120		PCU	P409644	
	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P409640	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P409775	
		Sulfate	13		mg SO4/L	P409782	
	SM 2320 B-2011	Total Alkalinity	9.1		mg CaCO3/L	P409857	
	SM 2540 C-2011	TDS	124	A	mg/L	P409917	
	SM 2540 D-2011	TSS	2	UA	mg/L	P409982	
	SM 4500 F-C-2011	Fluoride	0.059	I	mg F/L	P409860	
2304569	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P409953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P409673	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P409743	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P409774	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P410400	
2304570	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P409626	
2304590	EPA 8321B	2,4-D	7.4		ug/L	P409557	
		Acesulfame K	0.10	U	ug/L	P409584	
		2,4,5-T	0.0040	U	ug/L	P409557	
		AMPA	0.39	I	ug/L	P409584	
		Acetaminophen	0.0080	U	ug/L	P409557	
		Acetamiprid	0.0020	U	ug/L	P409557	
		Endothall	0.25	U	ug/L	P409584	
		Glufosinate	0.10	U	ug/L	P409584	
		Glyphosate	24		ug/L	P409584	
		Afidopyropen	0.0020	U	ug/L	P409557	
		Bentazon	0.0044		ug/L	P409557	
		Sucralose	0.12		ug/L	P409584	
		Benzovindiflupyr	0.0020	U	ug/L	P409557	
		Carbamazepine	8.0E-04	U	ug/L	P409557	
		Clothianidin	0.0020	U	ug/L	P409557	
		Dinotefuran	0.0020	U	ug/L	P409557	
		Diuron	0.0020	U	ug/L	P409557	
		Fenuron	0.016	U	ug/L	P409557	
		Fluridone	0.0023	I	ug/L	P409557	
		Imazapyr	0.017		ug/L	P409557	
		Hydrocodone	0.0020	U	ug/L	P409557	
		Ibuprofen	0.020	U	ug/L	P409557	RPD
		Imidacloprid	0.0025	I	ug/L	P409557	
		Linuron	0.0040	U	ug/L	P409557	
		Mandestrobin	0.0020	U	ug/L	P409557	
		MCPP	0.0040	U	ug/L	P409557	
		Naproxen	0.0080	U	ug/L	P409557	
		Primidone	0.0040	U	ug/L	P409557	
		Pyraclostrobin	0.0020	U	ug/L	P409557	

Field ID: G4CE0220 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304590	EPA 8321B	Thiamethoxam	0.0040	I	ug/L	P409557	
		Tolfenpyrad	0.0020	U	ug/L	P409557	
		Triclopyr	0.0040	U	ug/L	P409557	MS
2304591	EPA 200.7 Rev. 4.4	Barium	16.9		ug/L	P409654	
		Calcium	8.63		mg/L	P409654	
		Iron	290		ug/L	P409654	
		Magnesium	3.97		mg/L	P409654	
		Manganese	5.8		ug/L	P409654	
		Potassium	3.7		mg/L	P409654	
		Sodium	18.8		mg/L	P409654	
		Zinc	5.0	U	ug/L	P409654	
	EPA 200.8 Rev. 5.4	Aluminum	180		ug/L	P409654	
		Antimony	0.067	I	ug/L	P409654	
		Arsenic	0.48		ug/L	P409654	
		Boron**	37.6		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.55	I	ug/L	P409654	
		Copper	0.85		ug/L	P409654	
		Lead	0.22	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	37.9		mg/L	P409654	
2304610	EPA 8270E	Acetochlor	0.24	U	ng/L	P409681	
		Alachlor	0.24	U	ng/L	P409681	
		Ametryn	0.56	U	ng/L	P409681	
		Atrazine	6.4		ng/L	P409681	
		Atrazine Desethyl	1.9	I	ng/L	P409681	
		Azinphos Methyl	1.9	U	ng/L	P409681	
		Azoxystrobin**	0.86	I	ng/L	P409681	
		Bromacil	9.8		ng/L	P409681	
		Butylate	0.38	U	ng/L	P409681	
		Caffeine**	7.1	U	ng/L	P409681	
		Carbophenothion	0.19	U	ng/L	P409681	
		Carfentrazone Ethyl**	0.094	U	ng/L	P409681	
		Chlorfenapyr**	0.16	U	ng/L	P409681	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P409681	
		Chlorpyrifos Methyl	0.047	U	ng/L	P409681	
		Coumaphos**	0.47	U	ng/L	P409681	
		Cyanazine	3.1	U	ng/L	P409681	
		Cyprodinil**	0.094	U	ng/L	P409681	
		Demeton	1.4	U	ng/L	P409681	
		Diazinon	0.12	U	ng/L	P409681	
		Difenoconazole**	0.56	U	ng/L	P409681	

Field ID: G4CE0220 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304610	EPA 8270E	Dimethenamid**	0.094	U	ng/L	P409681	
		Dimethomorph**	0.16	U	ng/L	P409681	
		Disulfoton	0.47	U	ng/L	P409681	
		Dithiopyr**	0.16	U	ng/L	P409681	
		EPTC	1.2	U	ng/L	P409681	
		Ethion	0.14	U	ng/L	P409681	
		Ethoprop	0.094	U	ng/L	P409681	
		Etridiazole**	0.14	U	ng/L	P409681	
		Fenamiphos	0.47	U	ng/L	P409681	
		Fenbuconazole**	0.12	UJ	ng/L	P409681	LCS, MS
		Fipronil	0.24	U	ng/L	P409681	
		Fipronil Desulfinyl**	0.12	U	ng/L	P409681	
		Fipronil Sulfide	0.14	U	ng/L	P409681	
		Fipronil Sulfone	0.14	U	ng/L	P409681	
		Fluazifop-P-butyl**	0.094	U	ng/L	P409681	
		Fludioxonil**	0.12	U	ng/L	P409681	
		Flumioxazin**	78		ng/L	P409681	
		Flutolanil**	0.094	U	ng/L	P409681	
		Fluxapyroxad**	0.094	U	ng/L	P409681	
		Fonofos	0.19	U	ng/L	P409681	
		Hexazinone	25		ng/L	P409681	
		Imazalil**	0.71	U	ng/L	P409681	
		Iprodione**	0.56	U	ng/L	P409681	
		Loratadine**	0.094	U	ng/L	P409681	
		Malathion	0.33	U	ng/L	P409681	
		Metalaxyl	0.71	U	ng/L	P409681	
		Metolachlor	0.99	I	ng/L	P409681	
		Metribuzin	2.4	U	ng/L	P409681	
		Mevinphos	0.99	U	ng/L	P409681	
		Molinate	0.28	U	ng/L	P409681	
		Myclobutanil**	0.24	U	ng/L	P409681	
		Naled**	1.4	UJ	ng/L	P409681	LCS, MS
		Napropamide**	0.38	U	ng/L	P409681	
		Norflurazon	2.5		ng/L	P409681	
		Oxadiazon	0.39	I	ng/L	P409681	
		Oxyfluorfen**	0.14	U	ng/L	P409681	
		Parathion Ethyl	0.24	U	ng/L	P409681	
		Parathion Methyl	0.52	U	ng/L	P409681	
		Pendimethalin	0.94	U	ng/L	P409681	
		Phenytoin**	3.3	U	ng/L	P409681	
		Phorate	0.49	U	ng/L	P409681	
		Prodiamine**	0.16	U	ng/L	P409681	
		Prometon	0.85	U	ng/L	P409681	
		Prometryn	0.19	U	ng/L	P409681	
		Pronamide**	0.14	U	ng/L	P409681	

Field ID: G4CE0220 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304610	EPA 8270E	Propanil**	0.12	U	ng/L	P409681	
		Propargite**	1.4	U	ng/L	P409681	
		Propiconazole**	0.47	U	ng/L	P409681	
		Pyraflufen Ethyl**	0.24	U	ng/L	P409681	
		Pyridaben**	0.42	U	ng/L	P409681	
		Pyriproxyfen**	0.12	U	ng/L	P409681	
		Simazine	0.47	U	ng/L	P409681	
		Stirophos**	0.12	U	ng/L	P409681	
		Sulfentrazone**	0.47	U	ng/L	P409681	
		Tebuconazole**	0.47	U	ng/L	P409681	
		Terbufos	0.094	U	ng/L	P409681	
		Terbuthylazine	0.40	U	ng/L	P409681	
		Thiobencarb**	0.56	U	ng/L	P409681	
		Triadimefon**	0.24	U	ng/L	P409681	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: The surrogate 2,4-D-d3 recovery could not be assessed due to an elevated level of 2,4-D in the sample matrix.
EPA 8270E: MS accuracy for Dimethanamid and Sulfentrazone not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P409644

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409640

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

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: P409654

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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: P409775

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

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: P409953

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409743

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409774

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409626

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

Reference Method: EPA 8270E
Batch ID: P409681

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P409681

Component	Result	Code	Units
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
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P409681

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P409681

Component	Result	Code	Units
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: P409557

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P409557

Component	Result	Code	Units
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: P409584

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: P409857

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

Reference Method: SM 2540 C-2011
Batch ID: P409917

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P409982

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P410400

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: P409644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.5		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.2		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	108		P	85 - 115
Iron	108		P	85 - 115
Magnesium	108		P	85 - 115
Manganese	109		P	85 - 115
Potassium	106		P	85 - 115
Sodium	105		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Boron	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	100		P	85 - 115
Copper	98.8		P	85 - 115
Lead	99.1		P	85 - 115
Nickel	101		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409775

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409743

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: P409774

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409626

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

Reference Method: EPA 8270E
Batch ID: P409681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	88.1		P	70 - 121
Alachlor	95.0		P	68 - 119
Ametryn	101		P	64 - 139
Atrazine	79.4		P	76 - 120
Atrazine Desethyl	45.9		P	44 - 126
Azinphos Methyl	96.1		P	43 - 192
Azoxystrobin	90.1		P	36 - 224
Bromacil	84.5		P	52 - 121
Butylate	53.3		P	28 - 91.0
Caffeine	104		P	50 - 134
Carbophenothion	73.8		P	56 - 129
Carfentrazone Ethyl	89.2		P	60 - 141
Chlorfenapyr	79.7		P	56 - 115
Chlorpyrifos Ethyl	81.4		P	60 - 118
Chlorpyrifos Methyl	78.6		P	68 - 119
Coumaphos	79.8		P	18 - 250
Cyanazine	135		P	61 - 250
Cyprodinil	92.1		P	55 - 145
Demeton	68.7		P	30 - 159
Diazinon	86.7		P	70 - 123
Difenoconazole	128		P	49 - 204
Dimethenamid	72.5		P	64 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P409681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dimethomorph	103		P	12 - 219
Disulfoton	73.3		P	44 - 125
Dithiopyr	87.7		P	64 - 115
EPTC	54.3		P	28 - 86.0
Ethion	72.2		P	33 - 125
Ethoprop	75.2		P	64 - 116
Etridiazole	64.4		P	34 - 91.0
Fenamiphos	79.7		P	12 - 127
Fenbuconazole	48.3		F	59 - 151
Fipronil	90.3		P	67 - 129
Fipronil Desulfinyl	93.6		P	65 - 127
Fipronil Sulfide	80.1		P	61 - 116
Fipronil Sulfone	65.1		P	55 - 117
Fluazifop-P-butyl	69.2		P	62 - 127
Fludioxonil	77.2		P	62 - 128
Flumioxazin	63.0		P	33 - 250
Flutolanil	77.1		P	56 - 127
Fluxapyroxad	59.8		P	45 - 128
Fonofos	76.2		P	62 - 111
Hexazinone	84.4		P	46 - 139
Imazalil	75.4		P	38 - 142
Iprodione	77.7		P	47 - 135
Loratadine	79.1		P	10 - 244
Malathion	89.3		P	61 - 139
Metalaxyl	86.3		P	10 - 119
Metolachlor	90.9		P	65 - 118
Metribuzin	81.4		P	51 - 250
Mevinphos	55.6		P	53 - 121
Molinate	56.4		P	42 - 96.0
Myclobutanil	77.1		P	55 - 128
Naled	105		F	10 - 98.0
Napropamide	81.1		P	49 - 121
Norflurazon	73.6		P	61 - 126
Oxadiazon	74.3		P	59 - 116
Oxyfluorfen	86.5		P	64 - 137
Parathion Ethyl	91.5		P	70 - 112
Parathion Methyl	93.9		P	76 - 133
Pendimethalin	89.6		P	52 - 117
Phenytoin	40.8		P	10 - 199
Phorate	66.9		P	48 - 121
Prodiamine	43.3		P	26 - 142
Prometon	83.7		P	43 - 123
Prometryn	81.9		P	66 - 127
Pronamide	80.7		P	75 - 121
Propanil	80.4		P	45 - 150
Propargite	84.6		P	42 - 208
Propiconazole	75.0		P	60 - 125
Pyraflufen Ethyl	79.8		P	70 - 138
Pyridaben	74.7		P	35 - 245
Pyriproxyfen	76.2		P	30 - 149
Simazine	72.8		P	72 - 125
Stirophos	70.0		P	29 - 164

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P409681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfentrazone	65.5		P	21 - 139
Tebuconazole	58.5		P	10 - 115
Terbufos	101		P	60 - 123
Terbuthylazine	97.1		P	72 - 115
Thiobencarb	95.8		P	31 - 139
Triadimefon	90.0		P	65 - 116

Reference Method: EPA 8321B
Batch ID: P409557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.8		P	40 - 150
2,4,5-T	63.9		P	40 - 150
Acetaminophen	62.7		P	30 - 150
Acetamiprid	83.8		P	40 - 150
Afidopyropen	49.6		P	40 - 150
Bentazon	83.1		P	30 - 150
Benzovindiflupyr	66.9		P	40 - 150
Carbamazepine	96.6		P	40 - 150
Clothianidin	81.7		P	40 - 150
Dinotefuran	98.9		P	40 - 150
Diuron	98.1		P	40 - 150
Fenuron	86.1		P	40 - 150
Fluridone	89.1		P	40 - 150
Hydrocodone	85.0		P	40 - 150
Ibuprofen	101		P	40 - 150
Imazapyr	101		P	40 - 150
Imidacloprid	79.8		P	40 - 150
Linuron	59.2		P	40 - 150
Mandestrobin	93.4		P	40 - 150
MCPP	102		P	40 - 150
Naproxen	64.8		P	40 - 150
Primidone	109		P	40 - 150
Pyraclostrobin	70.6		P	40 - 150
Thiamethoxam	103		P	40 - 150
Tolfenpyrad	40.4		P	30 - 150
Triclopyr	55.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P409584

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	95.4		P	40 - 150
AMPA	95.0		P	40 - 150
Endothall	61.7		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	92.5		P	40 - 150
Sucralose	90.3		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P409857

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

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304395	Barium	109	105	P/P	80 - 120
2304395	Calcium	108	94.8	P/P	80 - 120
2304395	Iron	105	101	P/P	80 - 120
2304395	Magnesium	105	100	P/P	80 - 120
2304395	Manganese	109	105	P/P	80 - 120
2304395	Potassium	104	99.7	P/P	80 - 120
2304395	Sodium	99.8		P	80 - 120
2304395	Zinc	108	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304395	Aluminum	103	94.6	P/P	80 - 120
2304395	Antimony	104	95.4	P/P	80 - 120
2304395	Arsenic	104	96.1	P/P	80 - 120
2304395	Boron	105	96.4	P/P	80 - 120
2304395	Cadmium	103	94.0	P/P	80 - 120
2304395	Chromium	104	95.9	P/P	80 - 120
2304395	Copper	102	94.1	P/P	80 - 120
2304395	Lead	100	92.7	P/P	80 - 120
2304395	Nickel	104	94.6	P/P	80 - 120
2304395	Selenium	102	94.1	P/P	80 - 120
2304395	Silver	103	102	P/P	80 - 120
2304395	Thallium	109	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304253	Chloride	106		P	90 - 110
2304379	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304253	Sulfate	101		P	90 - 110
2304379	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304766	Ammonia-N	98.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304367	Kjeldahl Nitrogen	105	108	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304616	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304629	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304570	O-Phosphate-P	97.1	97.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P409681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305257	Acetochlor	99.4	115	P/P	65 - 124
2305257	Alachlor	99.6	121	P/P	61 - 121
2305257	Ametryn	78.8	106	P/P	52 - 216
2305257	Atrazine	93.0	91.8	P/P	68 - 133
2305257	Atrazine Desethyl	54.8	57.8	P/P	15 - 160
2305257	Azinphos Methyl	98.4	122	P/P	40 - 292
2305257	Azoxystrobin	99.2	106	P/P	12 - 242
2305257	Bromacil	98.3	112	P/P	54 - 167
2305257	Butylate	57.6	56.7	P/P	14 - 94.0
2305257	Caffeine	158	86.7	P/P	10 - 226
2305257	Carbophenothion	85.9	83.6	P/P	49 - 122
2305257	Carfentrazone Ethyl	95.7	102	P/P	53 - 138
2305257	Chlorfenapyr	78.1	90.7	P/P	50 - 150
2305257	Chlorpyrifos Ethyl	91.2	86.8	P/P	52 - 122
2305257	Chlorpyrifos Methyl	97.7	102	P/P	66 - 117
2305257	Coumaphos	79.2	74.5	P/P	50 - 220
2305257	Cyanazine	180	172	P/P	43 - 245
2305257	Cyprodinil	80.8	92.8	P/P	50 - 150
2305257	Demeton	83.0	81.4	P/P	43 - 188
2305257	Diazinon	97.5	109	P/P	69 - 131
2305257	Difenoconazole	150	174	P/P	34 - 231
2305257	Dimethomorph	121	121	P/P	50 - 150
2305257	Disulfoton	96.9	87.7	P/P	38 - 141
2305257	Dithiopyr	94.2	93.0	P/P	42 - 116
2305257	EPTC	54.4	50.8	P/P	18 - 85.0
2305257	Ethion	88.8	80.2	P/P	10 - 131
2305257	Ethoprop	94.5	93.0	P/P	65 - 129
2305257	Etridiazole	69.7	78.2	P/P	50 - 150
2305257	Fenamiphos	109	100	P/P	31 - 137
2305257	Fenbuconazole	42.3	46.0	F/F	57 - 160
2305257	Fipronil	92.6	105	P/P	62 - 132
2305257	Fipronil Desulfinyl	94.9	109	P/P	57 - 131
2305257	Fipronil Sulfide	76.3	78.8	P/P	15 - 138
2305257	Fipronil Sulfone	78.9	73.5	P/P	21 - 134

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P409681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305257	Fluazifop-P-butyl	70.0	70.4	P/P	54 - 133
2305257	Fludioxonil	94.6	97.7	P/P	58 - 127
2305257	Flumioxazin	78.2	80.8	P/P	33 - 300
2305257	Flutolanil	73.4	78.2	P/P	42 - 130
2305257	Fluxapyroxad	64.0	76.9	P/P	23 - 141
2305257	Fonofos	86.1	82.4	P/P	58 - 119
2305257	Hexazinone	105	99.8	P/P	68 - 172
2305257	Imazalil	93.4	97.9	P/P	48 - 283
2305257	Iprodione	75.8	105	P/P	38 - 140
2305257	Loratadine	107	112	P/P	50 - 150
2305257	Malathion	99.4	109	P/P	40 - 137
2305257	Metalaxyl	85.2	99.3	P/P	21 - 129
2305257	Metolachlor	98.3	104	P/P	55 - 122
2305257	Metribuzin	94.4	99.5	P/P	38 - 187
2305257	Mevinphos	69.7	77.2	P/P	54 - 134
2305257	Molinate	67.8	66.1	P/P	41 - 97.0
2305257	Myclobutanil	85.1	92.4	P/P	56 - 125
2305257	Naled	121	120	F/F	10 - 108
2305257	Napropamide	77.4	83.8	P/P	50 - 150
2305257	Norflurazon	86.8	89.4	P/P	32 - 122
2305257	Oxadiazon	78.6	84.3	P/P	40 - 119
2305257	Oxyfluorfen	107	116	P/P	61 - 153
2305257	Parathion Ethyl	93.7	98.8	P/P	59 - 130
2305257	Parathion Methyl	113	126	P/P	65 - 155
2305257	Pendimethalin	96.3	102	P/P	49 - 138
2305257	Phenytoin	52.9	53.3	P/P	50 - 200
2305257	Phorate	84.6	83.0	P/P	54 - 161
2305257	Prodiamine	45.4	52.2	P/P	33 - 161
2305257	Prometon	83.7	90.0	P/P	48 - 140
2305257	Prometryn	77.7	89.4	P/P	55 - 134
2305257	Pronamide	99.1	108	P/P	66 - 137
2305257	Propanil	87.4	103	P/P	50 - 150
2305257	Propargite	84.2	107	P/P	50 - 200
2305257	Propiconazole	88.1	85.3	P/P	36 - 150
2305257	Pyraflufen Ethyl	82.1	74.7	P/P	50 - 150
2305257	Pyridaben	83.0	89.2	P/P	50 - 200
2305257	Pyriproxyfen	83.3	98.9	P/P	10 - 165
2305257	Simazine	85.3	89.8	P/P	57 - 145
2305257	Stirophos	81.1	80.4	P/P	50 - 150
2305257	Tebuconazole	77.6	85.1	P/P	10 - 127
2305257	Terbufos	122	120	P/P	59 - 138
2305257	Terbuthylazine	94.5	101	P/P	68 - 119
2305257	Thiobencarb	88.0	101	P/P	50 - 150
2305257	Triadimefon	94.8	98.5	P/P	50 - 150

Reference Method: EPA 8321B
Batch ID: P409557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2303655	2,4-D	105	93.0	P/P	40 - 150
2303655	2,4,5-T	43.0	45.7	P/P	40 - 150
2303655	Acetaminophen	91.7	96.6	P/P	30 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P409557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2303655	Acetamiprid	114	101	P/P	40 - 150
2303655	Afidopyropen	96.2	100	P/P	40 - 150
2303655	Bentazon	63.4	77.2	P/P	30 - 150
2303655	Benzovindiflupyr	95.6	78.2	P/P	40 - 150
2303655	Carbamazepine	115	114	P/P	40 - 150
2303655	Clothianidin	103	96.4	P/P	40 - 150
2303655	Dinotefuran	132	117	P/P	40 - 150
2303655	Diuron	99.9	76.3	P/P	40 - 150
2303655	Fenuron	90.5	95.4	P/P	40 - 150
2303655	Fluridone	91.1	104	P/P	40 - 150
2303655	Hydrocodone	98.9	98.6	P/P	40 - 150
2303655	Ibuprofen	121	85.4	P/P	40 - 150
2303655	Imazapyr	136	141	P/P	40 - 150
2303655	Imidacloprid	114	120	P/P	40 - 150
2303655	Linuron	69.8	71.9	P/P	40 - 150
2303655	Mandestrobin	91.3	105	P/P	40 - 150
2303655	MCPP	118	104	P/P	40 - 150
2303655	Naproxen	71.5	85.6	P/P	40 - 150
2303655	Primidone	105	81.4	P/P	40 - 150
2303655	Pyraclostrobin	86.4	88.4	P/P	40 - 150
2303655	Thiamethoxam	124	121	P/P	40 - 150
2303655	Tolfenpyrad	50.3	38.5	P/P	30 - 150
2303655	Triclopyr	48.9	37.5	P/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P409584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304429	Acesulfame K	97.0	98.2	P/P	40 - 150
2304429	AMPA	54.5	53.6	P/P	40 - 150
2304429	Endothall	89.1	89.8	P/P	40 - 150
2304429	Glufosinate	86.1	84.8	P/P	40 - 150
2304429	Glyphosate	70.3	64.7	P/P	40 - 150
2304429	Sucralose	91.1	94.3	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304818	Fluoride	98.6	98.6	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P410400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2303952	Organic Carbon	101		P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304502	Color (true)	0.699	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304485	Turbidity	1.76	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304395	Barium	3.39	Spike	P	0 - 20
2304395	Calcium	6.56	Spike	P	0 - 20
2304395	Iron	3.49	Spike	P	0 - 20
2304395	Magnesium	3.77	Spike	P	0 - 20
2304395	Manganese	3.67	Spike	P	0 - 20
2304395	Potassium	3.08	Spike	P	0 - 20
2304395	Sodium	4.06	Spike	P	0 - 20
2304395	Zinc	3.87	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304395	Aluminum	6.41	Spike	P	0 - 20
2304395	Antimony	8.53	Spike	P	0 - 20
2304395	Arsenic	7.74	Spike	P	0 - 20
2304395	Boron	7.32	Spike	P	0 - 20
2304395	Cadmium	9.16	Spike	P	0 - 20
2304395	Chromium	8.27	Spike	P	0 - 20
2304395	Copper	8.30	Spike	P	0 - 20
2304395	Lead	7.69	Spike	P	0 - 20
2304395	Nickel	9.04	Spike	P	0 - 20
2304395	Selenium	8.24	Spike	P	0 - 20
2304395	Silver	1.27	Spike	P	0 - 20
2304395	Thallium	6.73	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304253	Chloride	0.448	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304253	Sulfate	0.537	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304766	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304367	Kjeldahl Nitrogen	2.03	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304616	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304629	Total-P	0.213	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304570	O-Phosphate-P	0.604	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P409681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305257	Acetochlor	14.4	Spike	P	0 - 27
2305257	Alachlor	19.3	Spike	P	0 - 27
2305257	Ametryn	29.5	Spike	P	0 - 34
2305257	Atrazine	1.15	Spike	P	0 - 41
2305257	Atrazine Desethyl	5.29	Spike	P	0 - 38
2305257	Azinphos Methyl	21.2	Spike	P	0 - 62
2305257	Azoxystrobin	6.63	Spike	P	0 - 32
2305257	Bromacil	13.3	Spike	P	0 - 30
2305257	Butylate	1.70	Spike	P	0 - 59

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P409681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305257	Caffeine	58.1	Spike	P	0 - 60
2305257	Carbophenothion	2.70	Spike	P	0 - 25
2305257	Carfentrazone Ethyl	6.86	Spike	P	0 - 26
2305257	Chlorfenapyr	14.9	Spike	P	0 - 30
2305257	Chlorpyrifos Ethyl	4.95	Spike	P	0 - 27
2305257	Chlorpyrifos Methyl	4.09	Spike	P	0 - 26
2305257	Coumaphos	6.08	Spike	P	0 - 30
2305257	Cyanazine	4.16	Spike	P	0 - 58
2305257	Cyprodinil	13.9	Spike	P	0 - 30
2305257	Demeton	1.95	Spike	P	0 - 25
2305257	Diazinon	10.8	Spike	P	0 - 29
2305257	Difenoconazole	15.3	Spike	P	0 - 25
2305257	Dimethenamid	12.0	Spike	P	0 - 30
2305257	Dimethomorph	0.0895	Spike	P	0 - 30
2305257	Disulfoton	9.89	Spike	P	0 - 33
2305257	Dithiopyr	1.27	Spike	P	0 - 22
2305257	EPTC	6.97	Spike	P	0 - 38
2305257	Ethion	10.1	Spike	P	0 - 79
2305257	Ethoprop	1.63	Spike	P	0 - 23
2305257	Etridiazole	11.5	Spike	P	0 - 30
2305257	Fenamiphos	8.31	Spike	P	0 - 58
2305257	Fenbuconazole	8.41	Spike	P	0 - 37
2305257	Fipronil	12.1	Spike	P	0 - 33
2305257	Fipronil Desulfinyl	14.2	Spike	P	0 - 26
2305257	Fipronil Sulfide	3.23	Spike	P	0 - 37
2305257	Fipronil Sulfone	7.11	Spike	P	0 - 50
2305257	Fluazifop-P-butyl	0.564	Spike	P	0 - 24
2305257	Fludioxonil	3.26	Spike	P	0 - 26
2305257	Flumioxazin	3.25	Spike	P	0 - 37
2305257	Flutolanil	6.26	Spike	P	0 - 26
2305257	Fluxapyroxad	16.6	Spike	P	0 - 34
2305257	Fonofos	4.43	Spike	P	0 - 27
2305257	Hexazinone	4.62	Spike	P	0 - 36
2305257	Imazalil	4.68	Spike	P	0 - 65
2305257	Iprodione	32.3	Spike	P	0 - 33
2305257	Loratadine	5.10	Spike	P	0 - 30
2305257	Malathion	9.04	Spike	P	0 - 44
2305257	Metalaxyl	15.3	Spike	P	0 - 38
2305257	Metolachlor	6.02	Spike	P	0 - 36
2305257	Metribuzin	5.29	Spike	P	0 - 63
2305257	Mevinphos	10.2	Spike	P	0 - 26
2305257	Molinate	2.61	Spike	P	0 - 40
2305257	Myclobutanil	8.14	Spike	P	0 - 21
2305257	Naled	0.639	Spike	P	0 - 26
2305257	Napropamide	7.95	Spike	P	0 - 30
2305257	Norflurazon	2.97	Spike	P	0 - 24
2305257	Oxadiazon	6.93	Spike	P	0 - 27
2305257	Oxyfluorfen	7.96	Spike	P	0 - 24
2305257	Parathion Ethyl	5.24	Spike	P	0 - 28
2305257	Parathion Methyl	10.6	Spike	P	0 - 27
2305257	Pendimethalin	5.71	Spike	P	0 - 31

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P409681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305257	Phenytoin	0.675	Spike	P	0 - 30
2305257	Phorate	1.90	Spike	P	0 - 27
2305257	Prodiamine	14.0	Spike	P	0 - 52
2305257	Prometon	7.18	Spike	P	0 - 31
2305257	Prometryn	14.0	Spike	P	0 - 28
2305257	Pronamide	8.56	Spike	P	0 - 26
2305257	Propanil	16.5	Spike	P	0 - 30
2305257	Propargite	24.1	Spike	P	0 - 30
2305257	Propiconazole	3.22	Spike	P	0 - 31
2305257	Pyraflufen Ethyl	9.32	Spike	P	0 - 30
2305257	Pyridaben	7.28	Spike	P	0 - 30
2305257	Pyriproxyfen	17.2	Spike	P	0 - 50
2305257	Simazine	5.03	Spike	P	0 - 29
2305257	Stirophos	0.872	Spike	P	0 - 30
2305257	Sulfentrazone	2.56	Spike	P	0 - 33
2305257	Tebuconazole	9.18	Spike	P	0 - 44
2305257	Terbufos	1.74	Spike	P	0 - 29
2305257	Terbuthylazine	6.92	Spike	P	0 - 27
2305257	Thiobencarb	13.7	Spike	P	0 - 30
2305257	Triadimefon	3.78	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P409557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2303655	2,4-D	11.7	Spike	P	0 - 30
2303655	2,4,5-T	6.20	Spike	P	0 - 30
2303655	Acetaminophen	5.18	Spike	P	0 - 30
2303655	Acetamiprid	12.8	Spike	P	0 - 30
2303655	Afidopyropen	4.19	Spike	P	0 - 30
2303655	Bentazon	11.3	Spike	P	0 - 30
2303655	Benzovindiflupyr	20.0	Spike	P	0 - 30
2303655	Carbamazepine	0.304	Spike	P	0 - 30
2303655	Clothianidin	6.40	Spike	P	0 - 30
2303655	Dinotefuran	12.2	Spike	P	0 - 30
2303655	Diuron	25.2	Spike	P	0 - 30
2303655	Fenuron	5.28	Spike	P	0 - 30
2303655	Fluridone	12.6	Spike	P	0 - 30
2303655	Hydrocodone	0.229	Spike	P	0 - 30
2303655	Ibuprofen	34.6	Spike	F	0 - 30
2303655	Imazapyr	3.09	Spike	P	0 - 30
2303655	Imidacloprid	5.12	Spike	P	0 - 30
2303655	Linuron	2.95	Spike	P	0 - 30
2303655	Mandestrobin	13.7	Spike	P	0 - 30
2303655	MCPP	12.4	Spike	P	0 - 30
2303655	Naproxen	18.0	Spike	P	0 - 30
2303655	Primidone	25.0	Spike	P	0 - 30
2303655	Pyraclostrobin	2.21	Spike	P	0 - 30
2303655	Thiamethoxam	2.62	Spike	P	0 - 30
2303655	Tolfenpyrad	26.5	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P409557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2303655	Triclopyr	26.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P409584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304429	Acesulfame K	1.24	Spike	P	0 - 30
2304429	AMPA	1.44	Spike	P	0 - 30
2304429	Endothall	0.718	Spike	P	0 - 30
2304429	Glufosinate	1.54	Spike	P	0 - 30
2304429	Glyphosate	6.98	Spike	P	0 - 30
2304429	Sucralose	3.29	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P409857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Total Alkalinity	0.689	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P409917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304568	TDS	5.62	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2303952	Organic Carbon	0.370	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2304590
Field Sample ID: G4CE0220

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	97.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	120	P	30 - 160
EPA 8321B	Diuron-d6	87.0	P	30 - 160
EPA 8321B	Endothall-d6	88.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.7	P	30 - 160
EPA 8321B	Primidone-d5	118	P	30 - 160
EPA 8321B	Sucralose-d6	77.4	P	30 - 160

Lab Sample ID: 2304610
Field Sample ID: G4CE0220

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	63.4	P	20 - 200
EPA 8270E	Simazine-d10	89.5	P	71 - 140
EPA 8270E	Terbufos-d10	93.1	P	62 - 131

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A110311
Included Lab Sample IDs: 2304570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	99.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A110314
Included Lab Sample IDs: 2304568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1
Run ID: A110322
Included Lab Sample IDs: 2304568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.7	100	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A110358
Included Lab Sample IDs: 2304569

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A110370
Included Lab Sample IDs: 2304568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	108	107	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A110380
Included Lab Sample IDs: 2304590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.3	113	P/P	50 - 150
2,4,5-T	119	149	P/P	50 - 150
Acetaminophen	97.2	114	P/P	60 - 160
Acetamiprid	111	108	P/P	50 - 150
Afidopyropen	102	121	P/P	50 - 150
Bentazon	98.2	103	P/P	50 - 160
Benzovindiflupyr	77.8	94.8	P/P	50 - 150
Carbamazepine	98.0	116	P/P	60 - 150
Clothianidin	111	113	P/P	60 - 150
Dinotefuran	99.8	114	P/P	50 - 150
Diuron	110	112	P/P	60 - 160
Fenuron	89.1	113	P/P	60 - 150
Fluridone	108	119	P/P	60 - 160
Hydrocodone	96.9	102	P/P	60 - 150
Ibuprofen	135	112	P/P	50 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A110380
Included Lab Sample IDs: 2304590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	106	108	P/P	50 - 150
Imidacloprid	115	107	P/P	60 - 150
Linuron	81.0	126	P/P	60 - 150
Mandestrobin	119	121	P/P	50 - 150
MCPP	95.5	112	P/P	50 - 150
Naproxen	69.6	55.1	P/P	50 - 160
Primidone	107	99.8	P/P	60 - 150
Pyraclostrobin	120	143	P/P	60 - 150
Thiamethoxam	102	114	P/P	50 - 150
Tolfenpyrad	94.9	138	P/P	60 - 150
Triclopyr	99.5	139	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A110387
Included Lab Sample IDs: 2304590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.1	97.1	P/P	60 - 160
Glufosinate	98.6	104	P/P	60 - 160
Glyphosate	95.7	95.4	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A110393
Included Lab Sample IDs: 2304590

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	88.9	98.4	P/P	60 - 160
Endothall	72.6	83.6	P/P	60 - 160
Sucralose	82.0	84.8	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A110397
Included Lab Sample IDs: 2304591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	99.1	98.4	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	101	98.0	P/P	90 - 110
Cadmium	102	100	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	97.2	96.6	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Selenium	102	99.9	P/P	90 - 110
Silver	94.8	93.1	P/P	90 - 110
Thallium	105	104	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A110402
Included Lab Sample IDs: 2304569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	94.5	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A110414
Included Lab Sample IDs: 2304568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	94.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A110414
Included Lab Sample IDs: 2304568

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A110426
Included Lab Sample IDs: 2304591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	104	P/P	90 - 110
Calcium	99.5	101	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Magnesium	99.0	101	P/P	90 - 110
Manganese	104	105	P/P	90 - 110
Potassium	98.4	99.8	P/P	90 - 110
Sodium	100	102	P/P	90 - 110
Zinc	101	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A110454
Included Lab Sample IDs: 2304569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A110489
Included Lab Sample IDs: 2304569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	99.5	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A110507
Included Lab Sample IDs: 2304610

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	106		P	80 - 120
Alachlor	111		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A110507
Included Lab Sample IDs: 2304610

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	99.2		P	80 - 120
Atrazine	99.2		P	80 - 120
Atrazine Desethyl	110		P	80 - 120
Azinphos Methyl	95.8		P	80 - 120
Azoxystrobin	101		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	102		P	80 - 120
Carbophenothion	81.8		P	80 - 120
Carfentrazone Ethyl	101		P	80 - 120
Chlorfenapyr	100		P	80 - 120
Chlorpyrifos Ethyl	106		P	80 - 120
Chlorpyrifos Methyl	99.7		P	80 - 120
Coumaphos	83.2		P	80 - 120
Cyanazine	109		P	80 - 120
Cyprodinil	94.2		P	80 - 120
Demeton	94.4		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	97.1		P	80 - 120
Dimethenamid	107		P	80 - 120
Dimethomorph	99.1		P	80 - 120
Disulfoton	95.4		P	80 - 120
Dithiopyr	94.1		P	80 - 120
EPTC	101		P	80 - 120
Ethion	98.6		P	80 - 120
Ethoprop	98.5		P	80 - 120
Etridiazole	102		P	80 - 120
Fenamiphos	100		P	80 - 120
Fenbuconazole	113		P	80 - 120
Fipronil	96.7		P	80 - 120
Fipronil Desulfinyl	98.7		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	90.1		P	80 - 120
Fluazifop-P-butyl	81.2		P	80 - 120
Fludioxonil	100		P	80 - 120
Flumioxazin	114		P	80 - 120
Flutolanil	108		P	80 - 120
Fluxapyroxad	90.9		P	80 - 120
Fonofos	98.1		P	80 - 120
Imazalil	99.2		P	80 - 120
Iprodione	98.5		P	80 - 120
Loratadine	102		P	80 - 120
Malathion	91.8		P	80 - 120
Metalaxyl	98.8		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	105		P	80 - 120
Mevinphos	96.1		P	80 - 120
Molinate	97.7		P	80 - 120
Myclobutanil	106		P	80 - 120
Naled	110		P	80 - 120
Napropamide	101		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A110507
Included Lab Sample IDs: 2304610

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Norflurazon	99.3		P	80 - 120
Oxadiazon	108		P	80 - 120
Oxyfluorfen	96.3		P	80 - 120
Parathion Ethyl	109		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	108		P	80 - 120
Phenytoin	101		P	80 - 120
Phorate	92.5		P	80 - 120
Prodiamine	86.5		P	80 - 120
Prometon	105		P	80 - 120
Prometryn	100		P	80 - 120
Pronamide	106		P	80 - 120
Propanil	105		P	80 - 120
Propargite	98.0		P	80 - 120
Propiconazole	100		P	80 - 120
Pyraflufen Ethyl	97.6		P	80 - 120
Pyridaben	101		P	80 - 120
Pyriproxyfen	106		P	80 - 120
Simazine	103		P	80 - 120
Stirophos	101		P	80 - 120
Sulfentrazone	92.7		P	80 - 120
Tebuconazole	95.7		P	80 - 120
Terbufos	93.9		P	80 - 120
Terbuthylazine	106		P	80 - 120
Thiobencarb	110		P	80 - 120
Triadimefon	109		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A110642
Included Lab Sample IDs: 2304569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	96.6	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		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	97.5				0.699	
EPA 180.1 Rev. 2.0	Turbidity	96.2				1.76	
EPA 200.7 Rev. 4.4	Barium	108	109	105			3.39
	Calcium	108	108	94.8			6.56
	Iron	108	105	101			3.49
	Magnesium	108	105	100			3.77
	Manganese	109	109	105			3.67
	Potassium	106	104	99.7			3.08
	Sodium	105	99.8				4.06
	Zinc	105	108	103			3.87
EPA 200.8 Rev. 5.4	Aluminum	101	103	94.6			6.41
	Antimony	102	104	95.4			8.53
	Arsenic	102	104	96.1			7.74
	Boron	102	105	96.4			7.32
	Cadmium	101	103	94.0			9.16
	Chromium	100	104	95.9			8.27
	Copper	98.8	102	94.1			8.30
	Lead	99.1	100	92.7			7.69
	Nickel	101	104	94.6			9.04
	Selenium	101	102	94.1			8.24
	Silver	101	103	102			1.27
	Thallium	106	109	102			6.73
EPA 300.0 Rev. 2.1	Chloride	106	106	107		0.448	
	Sulfate	106	101	102		0.537	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	98.2	99.6			1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	105	108			2.03
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	98.0	98.0			0.0
EPA 365.1 Rev. 2.0	Total-P	103	107	107			0.213
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6	97.1	97.8			0.604
EPA 8270E	Acetochlor	88.1	115	99.4			14.4
	Alachlor	95.0	121	99.6			19.3
	Ametryn	101	106	78.8			29.5
	Atrazine	79.4	91.8	93.0			1.15
	Atrazine Desethyl	45.9	57.8	54.8			5.29
	Azinphos Methyl	96.1	122	98.4			21.2
	Azoxystrobin	90.1	106	99.2			6.63
	Bromacil	84.5	112	98.3			13.3
	Butylate	53.3	56.7	57.6			1.70
	Caffeine	104	86.7	158			58.1
	Carbophenothion	73.8	83.6	85.9			2.70
	Carfentrazone Ethyl	89.2	102	95.7			6.86
	Chlorfenapyr	79.7	90.7	78.1			14.9
	Chlorpyrifos Ethyl	81.4	86.8	91.2			4.95
	Chlorpyrifos Methyl	78.6	102	97.7			4.09
	Coumaphos	79.8	74.5	79.2			6.08
	Cyanazine	135	172	180			4.16
	Cyprodinil	92.1	92.8	80.8			13.9
	Demeton	68.7	81.4	83.0			1.95
	Diazinon	86.7	109	97.5			10.8
	Difenoconazole	128	174	150			15.3
	Dimethenamid	72.5					12.0
	Dimethomorph	103	121	121			0.0895
	Disulfoton	73.3	87.7	96.9			9.89
	Dithiopyr	87.7	93.0	94.2			1.27

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	EPTC	54.3	50.8	54.4			6.97
	Ethion	72.2	80.2	88.8			10.1
	Ethoprop	75.2	93.0	94.5			1.63
	Etridiazole	64.4	78.2	69.7			11.5
	Fenamiphos	79.7	100	109			8.31
	Fenbuconazole	48.3	46.0	42.3			8.41
	Fipronil	90.3	105	92.6			12.1
	Fipronil Desulfinyl	93.6	109	94.9			14.2
	Fipronil Sulfide	80.1	78.8	76.3			3.23
	Fipronil Sulfone	65.1	73.5	78.9			7.11
	Fluazifop-P-butyl	69.2	70.4	70.0			0.564
	Fludioxonil	77.2	97.7	94.6			3.26
	Flumioxazin	63.0	80.8	78.2			3.25
	Flutolanil	77.1	78.2	73.4			6.26
	Fluxapyroxad	59.8	76.9	64.0			16.6
	Fonofos	76.2	82.4	86.1			4.43
	Hexazinone	84.4	99.8	105			4.62
	Imazalil	75.4	97.9	93.4			4.68
	Iprodione	77.7	105	75.8			32.3
	Loratadine	79.1	112	107			5.10
	Malathion	89.3	109	99.4			9.04
	Metalaxyl	86.3	99.3	85.2			15.3
	Metolachlor	90.9	104	98.3			6.02
	Metribuzin	81.4	99.5	94.4			5.29
	Mevinphos	55.6	77.2	69.7			10.2
	Molinate	56.4	66.1	67.8			2.61
	Myclobutanil	77.1	92.4	85.1			8.14
	Naled	105	120	121			0.639
	Napropamide	81.1	83.8	77.4			7.95
	Norflurazon	73.6	89.4	86.8			2.97
	Oxadiazon	74.3	84.3	78.6			6.93
	Oxyfluorfen	86.5	116	107			7.96
	Parathion Ethyl	91.5	93.7	98.8			5.24
	Parathion Methyl	93.9	113	126			10.6
	Pendimethalin	89.6	96.3	102			5.71
	Phenytoin	40.8	52.9	53.3			0.675
	Phorate	66.9	84.6	83.0			1.90
	Prodiamine	43.3	45.4	52.2			14.0
	Prometon	83.7	83.7	90.0			7.18
	Prometryn	81.9	77.7	89.4			14.0
	Pronamide	80.7	99.1	108			8.56
	Propanil	80.4	87.4	103			16.5
	Propargite	84.6	84.2	107			24.1
	Propiconazole	75.0	88.1	85.3			3.22
	Pyraflufen Ethyl	79.8	82.1	74.7			9.32
	Pyridaben	74.7	83.0	89.2			7.28
	Pyriproxyfen	76.2	83.3	98.9			17.2
	Simazine	72.8	85.3	89.8			5.03
	Stirophos	70.0	81.1	80.4			0.872
	Sulfentrazone	65.5					2.56
	Tebuconazole	58.5	77.6	85.1			9.18
	Terbufos	101	122	120			1.74
	Terbuthylazine	97.1	94.5	101			6.92
	Thiobencarb	95.8	88.0	101			13.7

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Triadimefon	90.0	94.8	98.5			3.78
EPA 8321B	2,4-D	86.8	105	93.0			11.7
	2,4,5-T	63.9	43.0	45.7			6.20
	Acesulfame K	95.4	97.0	98.2			1.24
	Acetaminophen	62.7	91.7	96.6			5.18
	Acetamiprid	83.8	114	101			12.8
	Afidopyropen	49.6	96.2	100			4.19
	AMPA	95.0	54.5	53.6			1.44
	Bentazon	83.1	63.4	77.2			11.3
	Benzovindiflupyr	66.9	95.6	78.2			20.0
	Carbamazepine	96.6	115	114			0.304
	Clothianidin	81.7	103	96.4			6.40
	Dinotefuran	98.9	132	117			12.2
	Diuron	98.1	99.9	76.3			25.2
	Endothall	61.7	89.1	89.8			0.718
	Fenuron	86.1	90.5	95.4			5.28
	Fluridone	89.1	91.1	104			12.6
	Glufosinate	105	86.1	84.8			1.54
	Glyphosate	92.5	70.3	64.7			6.98
	Hydrocodone	85.0	98.9	98.6			0.229
	Ibuprofen	101	121	85.4			34.6
	Imazapyr	101	136	141			3.09
	Imidacloprid	79.8	114	120			5.12
	Linuron	59.2	69.8	71.9			2.95
	Mandestrobin	93.4	91.3	105			13.7
	MCPP	102	118	104			12.4
	Naproxen	64.8	71.5	85.6			18.0
	Primidone	109	105	81.4			25.0
	Pyraclostrobin	70.6	86.4	88.4			2.21
	Sucralose	90.3	91.1	94.3			3.29
	Thiamethoxam	103	124	121			2.62
	Tolfenpyrad	40.4	50.3	38.5			26.5
	Triclopyr	55.8	48.9	37.5			26.3
SM 2320 B-2011	Total Alkalinity	99.5				0.689	
SM 2540 C-2011	TDS					5.62	
SM 4500 F-C-2011	Fluoride	98.2	98.6	98.6			0.0
SM 5310 B-2011	Organic Carbon	97.2	101				0.370

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2304568
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2304568
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2304591
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2304591
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2304568
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2304568
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2304569
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2304569
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2304569
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2304569

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2304570
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2304610
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2304590
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2304568
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2304591
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2304568
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2304568
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2304568
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2304569

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	02/09/2022			02/09/2022 16:18	Anna M. Plaviak	2304568
EPA 180.1 Rev. 2.0	02/09/2022			02/09/2022 15:13	Khloe J Berg	2304568
EPA 200.7 Rev. 4.4	02/09/2022	02/10/2022 10:51	Megan Whitefoot	02/16/2022 00:10	Josef B Mick	2304591
EPA 200.8 Rev. 5.4	02/09/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 21:06	Alexander Thompson	2304591
EPA 300.0 Rev. 2.1	02/09/2022			02/12/2022 05:44	James L Waggerby	2304568
EPA 350.1 Rev. 2.0	02/09/2022			02/16/2022 14:01	Ping Hua	2304569
EPA 351.2 Rev. 2.0	02/09/2022	02/11/2022 10:40	Samantha L Bates	02/14/2022 17:40	Alexandra J Mattheus	2304569
EPA 353.2 Rev. 2.0	02/09/2022			02/11/2022 10:36	Beverly Y. Sanders	2304569
EPA 365.1 Rev. 2.0	02/09/2022	02/15/2022 14:20	Simonne.V. Calhoun	02/18/2022 13:15	Shengyu Ding	2304569
EPA 365.1 Rev. 2.0 dissolved	02/09/2022			02/09/2022 14:18	James L Waggerby	2304570
EPA 8270E	02/09/2022	02/14/2022 08:00	Fe-Val Siddell	02/16/2022 16:41	Michael Poppell	2304610
	02/09/2022	02/14/2022 08:00	Fe-Val Siddell	02/18/2022 17:28	Michael Poppell	2304610
EPA 8321B	02/09/2022	02/09/2022 13:30	June Rhew	02/11/2022 14:54	Juyoung Kim	2304590
	02/09/2022	02/09/2022 13:30	June Rhew	02/11/2022 16:03	Juyoung Kim	2304590
	02/09/2022	02/11/2022 09:00	Umesh Chiluwal	02/11/2022 12:50	Umesh Chiluwal	2304590
	02/09/2022	02/11/2022 09:00	Umesh Chiluwal	02/11/2022 16:19	Umesh Chiluwal	2304590
	02/09/2022	02/11/2022 09:00	Umesh Chiluwal	02/11/2022 19:59	Umesh Chiluwal	2304590
SM 2320 B-2011	02/09/2022			02/15/2022 01:14	Dale L. Simmons	2304568
SM 2340B	02/09/2022			02/16/2022 00:10	Josef B Mick	2304591
SM 2540 C-2011	02/09/2022			02/11/2022 14:02	Yijie Li	2304568
SM 2540 D-2011	02/09/2022			02/11/2022 14:02	Yijie Li	2304568
SM 4500 F-C-2011	02/09/2022			02/15/2022 01:14	Dale L. Simmons	2304568
SM 5310 B-2011	02/09/2022			02/27/2022 03:52	Touraj Touran	2304569