

Chemical Analysis Report

NE-DIST-2022-04-15-02

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

Event Description: **Calf Creek SCI and Moncrief SCI**
Request ID: **RQ-2022-04-18-15**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 13-MAY-2022 08:31

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: MONCRIEF CR N OF 33RD ST BRID

Collection Date/Time: 04/14/2022 09:45

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319738	DEP SOP: NU-094-1	Color (true)**	20	A	PCU	P412437	
	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P412439	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P412952	
		Sulfate	34		mg SO4/L	P412955	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P412807	
	SM 2540 C-2011	TDS	216		mg/L	P413061	
	SM 2540 D-2011	TSS	7	I	mg/L	P412988	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P412810	
2319739	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P412627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P412835	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P412622	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P412796	
	SM 5310 B-2011	Organic Carbon	7.1		mg C/L	P412974	
2319740	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P412434	
2319743	EPA 8321B	2,4-D	0.035		ug/L	P412403	
		Acesulfame K	0.15	I	ug/L	P412505	
		2,4,5-T	0.0040	U	ug/L	P412403	
		AMPA	0.54		ug/L	P412505	
		Acetaminophen	0.057		ug/L	P412403	
		Acetamiprid	0.0020	U	ug/L	P412403	
		Endothall	0.25	U	ug/L	P412505	
		Glufosinate	0.10	U	ug/L	P412505	
		Glyphosate	0.61		ug/L	P412505	
		Afidopyropen	0.0020	U	ug/L	P412403	
		Bentazon	0.013		ug/L	P412403	
		Sucralose	0.25		ug/L	P412505	
		Benzovindiflupyr	0.0020	U	ug/L	P412403	
		Carbamazepine	8.0E-04	U	ug/L	P412403	
		Clothianidin	0.0020	U	ug/L	P412403	
		Dinotefuran	0.0024	I	ug/L	P412403	
		Diuron	0.049		ug/L	P412403	
		Fenuron	0.016	U	ug/L	P412403	
		Fluridone	0.0016	I	ug/L	P412403	
		Imazapyr	0.10		ug/L	P412403	
		Hydrocodone	0.0020	U	ug/L	P412403	
		Ibuprofen	0.020	U	ug/L	P412403	
		Imidacloprid	0.0098		ug/L	P412403	
		Linuron	0.0040	U	ug/L	P412403	
		Mandestrobin	0.0020	U	ug/L	P412403	
		MCP	0.0074	I	ug/L	P412403	
		Naproxen	0.0080	U	ug/L	P412403	RPD
		Primidone	0.0040	U	ug/L	P412403	
		Pyraclostrobin	0.0020	U	ug/L	P412403	

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319743	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P412403	
		Tolfenpyrad	0.0020	U	ug/L	P412403	
		Triclopyr	0.0040	U	ug/L	P412403	
2319744	EPA 200.7 Rev. 4.4	Calcium	57.2		mg/L	P412515	
		Iron	750		ug/L	P412515	
		Magnesium	6.63		mg/L	P412515	
		Potassium	2.2		mg/L	P412515	
		Sodium	14.8		mg/L	P412515	
		Strontium	335		ug/L	P412515	
		Tin	3.0	U	ug/L	P412515	
		Titanium	2.7	I	ug/L	P412515	
		Vanadium	2.0	U	ug/L	P412515	
		Zinc	5.0	U	ug/L	P412515	
	EPA 200.8 Rev. 5.4	Aluminum	55		ug/L	P412515	
		Antimony	0.24		ug/L	P412515	
		Arsenic	1.30		ug/L	P412515	
		Barium	52.9		ug/L	P412515	
		Beryllium	0.014	I	ug/L	P412515	
		Boron**	67.5		ug/L	P412515	
		Cadmium	0.020	U	ug/L	P412515	
		Chromium	0.40	U	ug/L	P412515	
		Cobalt	0.181		ug/L	P412515	
		Copper	1.07		ug/L	P412515	
		Lead	0.80		ug/L	P412515	
		Manganese	55.1		ug/L	P412515	
		Molybdenum	0.90		ug/L	P412515	
		Nickel	0.98	I	ug/L	P412515	
		Selenium	0.21	I	ug/L	P412515	
		Silver	0.010	U	ug/L	P412515	
		Thallium	0.10	U	ug/L	P412515	
		Hardness	170		mg/L	P412515	
2319745	SM 2340 B-2011	Oxybenzone**	11	U	ng/L	P412504	
	EPA 8270E	Acetochlor	0.27	U	ng/L	P412504	
		Octinoxate**	21	UQ	ng/L	P413158	
		Alachlor	0.27	U	ng/L	P412504	
		Avobenzone**	110	U	ng/L	P412504	
		Ametryn	0.64	U	ng/L	P412504	
		Atrazine	3.8		ng/L	P412504	
		Atrazine Desethyl	1.6	U	ng/L	P412504	
		Azinphos Methyl	2.1	U	ng/L	P412504	
		Azoxystrobin**	1.1	I	ng/L	P412504	
		Bromacil	33		ng/L	P412504	
		Butylate	0.43	U	ng/L	P412504	
		Caffeine**	16	I	ng/L	P412504	
		Carbophenothion	0.21	U	ng/L	P412504	

MS

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319745	EPA 8270E	Carfentrazone Ethyl**	0.11	U	ng/L	P412504	MS
		Chlorfenapyr**	0.19	U	ng/L	P412504	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P412504	
		Chlorpyrifos Methyl	0.054	U	ng/L	P412504	MS, RPD
		Coumaphos**	0.54	U	ng/L	P412504	
		Cyanazine	3.5	U	ng/L	P412504	
		Cyprodinil**	0.11	U	ng/L	P412504	
		Demeton	1.6	U	ng/L	P412504	
		Diazinon	0.13	U	ng/L	P412504	
		Difenoconazole**	0.64	U	ng/L	P412504	MS, RPD
		Dimethenamid**	0.11	U	ng/L	P412504	
		Dimethomorph**	0.19	U	ng/L	P412504	RPD
		Disulfoton	0.54	U	ng/L	P412504	
		Dithiopyr**	0.19	U	ng/L	P412504	
		EPTC	1.3	U	ng/L	P412504	
		Ethion	0.16	U	ng/L	P412504	
		Ethoprop	0.11	U	ng/L	P412504	RPD
		Etridiazole**	0.16	U	ng/L	P412504	
		Fenamiphos	0.54	U	ng/L	P412504	
		Fenbuconazole**	0.13	U	ng/L	P412504	
		Fipronil	0.27	U	ng/L	P412504	MS
		Fipronil Desulfinyl**	0.13	U	ng/L	P412504	RPD
		Fipronil Sulfide	0.16	U	ng/L	P412504	
		Fipronil Sulfone	0.16	U	ng/L	P412504	
		Fluazifop-P-butyl**	0.11	U	ng/L	P412504	
		Fludioxonil**	0.13	U	ng/L	P412504	
		Flumioxazin**	1.9	U	ng/L	P412504	
		Flutolanil**	0.11	U	ng/L	P412504	
		Fluxapyroxad**	0.11	U	ng/L	P412504	
		Fonofos	0.21	U	ng/L	P412504	
		Hexazinone	0.54	U	ng/L	P412504	
		Imazalil**	0.80	U	ng/L	P412504	
		Iprodione**	0.64	U	ng/L	P412504	MS
		Loratadine**	0.11	U	ng/L	P412504	RPD
		Malathion	0.38	U	ng/L	P412504	
		Metalaxyl	0.80	U	ng/L	P412504	
		Metolachlor	1.1	I	ng/L	P412504	
		Metribuzin	2.7	U	ng/L	P412504	
		Mevinphos	1.1	U	ng/L	P412504	RPD
		Molinate	0.32	U	ng/L	P412504	
		Myclobutanil**	0.27	U	ng/L	P412504	MS, RPD
		Naled**	1.6	U	ng/L	P412504	
		Napropamide**	0.43	U	ng/L	P412504	
		Norflurazon	0.54	U	ng/L	P412504	MS
		Oxadiazon	0.83	I	ng/L	P412504	

Field ID: 20030316

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319745	EPA 8270E	Oxyfluorfen**	0.16	U	ng/L	P412504	
		Parathion Ethyl	0.27	U	ng/L	P412504	RPD
		Parathion Methyl	0.59	U	ng/L	P412504	RPD
		Pendimethalin	1.1	U	ng/L	P412504	
		Phenytol**	3.8	U	ng/L	P412504	
		Phorate	0.56	U	ng/L	P412504	
		Prodiatone**	0.19	U	ng/L	P412504	
		Prometon	0.97	U	ng/L	P412504	
		Prometryn	0.21	U	ng/L	P412504	
		Pronamide**	0.16	U	ng/L	P412504	
		Propanil**	0.13	U	ng/L	P412504	
		Propargite**	1.6	U	ng/L	P412504	
		Propiconazole**	0.54	U	ng/L	P412504	
		Pyraflufen Ethyl**	0.27	U	ng/L	P412504	
		Pyridaben**	0.48	U	ng/L	P412504	
		Pyriproxyfen**	0.13	U	ng/L	P412504	
		Simazine	6.7		ng/L	P412504	
		Stirophos**	0.13	U	ng/L	P412504	
		Sulfentrazone**	0.54	U	ng/L	P412504	
		Tebuconazole**	0.54	U	ng/L	P412504	
		Terbufos	0.11	U	ng/L	P412504	RPD
		Terbutylazine	0.46	U	ng/L	P412504	
		Thiobencarb**	0.64	U	ng/L	P412504	
		Triadimefon**	0.27	U	ng/L	P412504	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 8270E: Sample expired for preparation for octinoxate due to need for re-extraction.

EPA 8270E: MS accuracy for atrazine and oxadiazon not assessed due to high content of these parameters in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412437

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412439

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412515

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412515

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412952

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412955

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412627

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412835

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412622

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412796

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412434

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

Reference Method: EPA 8270E
Batch ID: P412504

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412504

Component	Result	Code	Units
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412504

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412504

Component	Result	Code	Units
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
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 8270E

Batch ID: P413158

Component	Result	Code	Units
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P412403

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
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	0.0020	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: P412505

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: P412807

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

Reference Method: SM 2540 C-2011

Batch ID: P413061

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P412988

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412974

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: P412437

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412439

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: P412515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	106		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	101		P	85 - 115
Sodium	105		P	85 - 115
Strontium	106		P	85 - 115
Tin	97.8		P	85 - 115
Titanium	97.4		P	85 - 115
Vanadium	93.4		P	85 - 115
Zinc	99.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.8		P	85 - 115
Antimony	99.1		P	85 - 115
Arsenic	99.9		P	85 - 115
Barium	103		P	85 - 115
Beryllium	95.7		P	85 - 115
Boron	100		P	85 - 115
Cadmium	96.8		P	85 - 115
Chromium	98.4		P	85 - 115
Cobalt	101		P	85 - 115
Copper	97.4		P	85 - 115
Lead	99.9		P	85 - 115
Manganese	98.4		P	85 - 115
Molybdenum	99.2		P	85 - 115
Nickel	98.5		P	85 - 115
Selenium	99.2		P	85 - 115
Silver	103		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412952

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412955

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412835

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412622

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412796

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412434

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

Reference Method: EPA 8270E
Batch ID: P412504

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	84.4		P	70 - 121
Alachlor	75.8		P	68 - 119
Ametryn	90.4		P	64 - 139
Atrazine	109		P	76 - 120
Atrazine Desethyl	52.5		P	44 - 126
Avobenzone	90.4		P	76 - 212
Azinphos Methyl	129		P	43 - 192
Azoxystrobin	91.9		P	36 - 224
Bromacil	78.1		P	52 - 121
Butylate	51.3		P	28 - 91.0
Caffeine	75.5		P	50 - 134
Carbophenothion	93.3		P	56 - 129
Carfentrazone Ethyl	103		P	60 - 141
Chlorfenapyr	74.5		P	56 - 115
Chlorpyrifos Ethyl	69.0		P	60 - 118
Chlorpyrifos Methyl	84.1		P	68 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412504

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Coumaphos	144		P	18 - 250
Cyanazine	116		P	61 - 250
Cyprodinil	90.8		P	55 - 145
Demeton	60.9		P	30 - 159
Diazinon	98.8		P	70 - 123
Difenoconazole	167		P	49 - 204
Dimethenamid	71.3		P	64 - 115
Dimethomorph	96.4		P	12 - 219
Disulfoton	86.2		P	44 - 125
Dithiopyr	73.8		P	64 - 115
EPTC	46.4		P	28 - 86.0
Ethion	63.9		P	33 - 125
Ethoprop	69.4		P	64 - 116
Etridiazole	55.6		P	34 - 91.0
Fenamiphos	83.3		P	12 - 127
Fenbuconazole	119		P	59 - 151
Fipronil	89.7		P	67 - 129
Fipronil Desulfinyl	88.2		P	65 - 127
Fipronil Sulfide	70.4		P	61 - 116
Fipronil Sulfone	70.5		P	55 - 117
Fluazifop-P-butyl	92.3		P	62 - 127
Fludioxonil	82.6		P	62 - 128
Flumioxazin	212		P	33 - 250
Flutolanil	80.7		P	56 - 127
Fluxapyroxad	79.3		P	45 - 128
Fonofos	81.4		P	62 - 111
Hexazinone	76.0		P	46 - 139
Imazalil	91.3		P	38 - 142
Iprodione	91.0		P	47 - 135
Loratadine	88.6		P	10 - 244
Malathion	79.5		P	61 - 139
Metalaxyl	70.2		P	10 - 119
Metolachlor	72.3		P	65 - 118
Metribuzin	77.8		P	51 - 250
Mevinphos	58.7		P	53 - 121
Molinate	59.1		P	42 - 96.0
Myclobutanil	92.1		P	55 - 128
Naled	70.8		P	10 - 98.0
Napropamide	59.3		P	49 - 121
Norflurazon	97.2		P	61 - 126
Oxadiazon	98.9		P	59 - 116
Oxybenzone	64.4		P	61 - 139
Oxyfluorfen	105		P	64 - 137
Parathion Ethyl	77.8		P	70 - 112
Parathion Methyl	103		P	76 - 133
Pendimethalin	88.1		P	52 - 117
Phenytoin	78.0		P	10 - 199
Phorate	52.1		P	48 - 121
Prodiamine	127		P	26 - 142
Prometon	80.5		P	43 - 123
Prometryn	83.2		P	66 - 127
Pronamide	85.4		P	75 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412504

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propanil	84.4		P	45 - 150
Propargite	115		P	42 - 208
Propiconazole	92.6		P	60 - 125
Pyraflufen Ethyl	95.9		P	70 - 138
Pyridaben	139		P	35 - 245
Pyriproxyfen	65.1		P	30 - 149
Simazine	87.3		P	72 - 125
Stirophos	72.1		P	29 - 164
Sulfentrazone	118		P	21 - 139
Tebuconazole	94.9		P	10 - 115
Terbufos	96.4		P	60 - 123
Terbuthylazine	81.8		P	72 - 115
Thiobencarb	72.8		P	31 - 139
Triadimefon	65.5		P	65 - 116

Reference Method: EPA 8270E
Batch ID: P413158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Octinoxate	70.4		P	25 - 150

Reference Method: EPA 8321B
Batch ID: P412403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.5		P	30 - 160
2,4,5-T	67.0		P	30 - 160
Acetaminophen	56.6		P	30 - 150
Acetamiprid	91.6		P	30 - 160
Afidopyropen	53.3		P	30 - 160
Bentazon	51.0		P	30 - 150
Benzovindiflupyr	80.4		P	30 - 160
Carbamazepine	92.3		P	30 - 160
Clothianidin	95.3		P	30 - 160
Dinotefuran	82.2		P	30 - 160
Diuron	90.6		P	30 - 160
Fenuron	112		P	30 - 160
Fluridone	84.8		P	30 - 160
Hydrocodone	88.5		P	30 - 160
Ibuprofen	72.1		P	30 - 160
Imazapyr	79.4		P	30 - 160
Imidacloprid	92.5		P	30 - 160
Linuron	66.6		P	30 - 160
Mandestrobin	92.0		P	30 - 160
MCPP	86.6		P	30 - 160
Naproxen	59.3		P	30 - 160
Primidone	90.6		P	30 - 160
Pyraclostrobin	86.1		P	30 - 160
Thiamethoxam	87.5		P	30 - 160
Tolfenpyrad	51.8		P	30 - 160
Triclopyr	67.0		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P412505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	98.9		P	40 - 150
Endothall	132		P	40 - 150
Glufosinate	93.2		P	40 - 150
Glyphosate	119		P	40 - 150
Sucralose	124		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P412807

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319463	Iron	104		P	80 - 120
2319463	Magnesium	107		P	80 - 120
2319463	Sodium	96.4		P	80 - 120
2319463	Strontium	104		P	80 - 120
2319463	Tin	96.7		P	80 - 120
2319463	Titanium	95.3		P	80 - 120
2319463	Vanadium	94.2		P	80 - 120
2319463	Zinc	98.2		P	80 - 120
2319694	Calcium	106	109	P/P	80 - 120
2319694	Iron	107	109	P/P	80 - 120
2319694	Magnesium	109	112	P/P	80 - 120
2319694	Potassium	108	112	P/P	80 - 120
2319694	Sodium	108	110	P/P	80 - 120
2319694	Strontium	112	115	P/P	80 - 120
2319694	Tin	99.3	102	P/P	80 - 120
2319694	Titanium	96.3	98.6	P/P	80 - 120
2319694	Vanadium	95.1	97.7	P/P	80 - 120
2319694	Zinc	102	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319463	Aluminum	99.0		P	75 - 125
2319463	Antimony	104		P	75 - 125
2319463	Arsenic	102		P	75 - 125
2319463	Barium	106		P	75 - 125
2319463	Beryllium	97.4		P	75 - 125
2319463	Boron	103		P	75 - 125
2319463	Cadmium	101		P	75 - 125
2319463	Chromium	103		P	75 - 125
2319463	Cobalt	102		P	75 - 125
2319463	Copper	95.6		P	75 - 125
2319463	Lead	103		P	75 - 125
2319463	Manganese	103		P	75 - 125
2319463	Molybdenum	106		P	75 - 125
2319463	Nickel	98.4		P	75 - 125
2319463	Selenium	101		P	75 - 125
2319463	Silver	102		P	75 - 125
2319463	Thallium	109		P	75 - 125
2319694	Aluminum	97.2	105	P/P	80 - 120
2319694	Antimony	98.0	102	P/P	80 - 120
2319694	Arsenic	95.1	100	P/P	80 - 120
2319694	Barium	101	105	P/P	80 - 120
2319694	Beryllium	92.3	96.3	P/P	80 - 120
2319694	Boron	102	107	P/P	80 - 120
2319694	Cadmium	99.2	103	P/P	80 - 120
2319694	Chromium	97.1	102	P/P	80 - 120
2319694	Cobalt	95.0	100	P/P	80 - 120
2319694	Copper	93.0	97.5	P/P	80 - 120
2319694	Lead	98.6	104	P/P	80 - 120
2319694	Manganese	97.0	103	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319694	Molybdenum	96.9	102	P/P	80 - 120
2319694	Nickel	93.8	98.7	P/P	80 - 120
2319694	Selenium	94.2	97.8	P/P	80 - 120
2319694	Silver	102	104	P/P	80 - 120
2319694	Thallium	99.7	107	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P412952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319726	Chloride	96.9		P	90 - 110
2319765	Chloride	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P412955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319726	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319739	Ammonia-N	97.4	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P412835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319291	Kjeldahl Nitrogen	96.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319710	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319805	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P412434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319717	O-Phosphate-P	97.9	99.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319561	Acetochlor	87.0	107	P/P	65 - 124
2319561	Alachlor	80.3	104	P/P	61 - 121
2319561	Ametryn	104	119	P/P	52 - 216
2319561	Atrazine Desethyl	58.6	52.8	P/P	15 - 160
2319561	Avobenzone	89.8	81.6	P/P	59 - 206
2319561	Azinphos Methyl	171	206	P/P	40 - 292
2319561	Azoxystrobin	113	143	P/P	12 - 242
2319561	Bromacil	83.9	104	P/P	54 - 167
2319561	Butylate	34.0	43.0	P/P	14 - 94.0
2319561	Caffeine	79.5	80.3	P/P	10 - 226
2319561	Carbophenothion	117	144	P/F	49 - 122
2319561	Carfentrazone Ethyl	114	143	P/F	53 - 138
2319561	Chlorfenapyr	66.6	87.9	P/P	50 - 150
2319561	Chlorpyrifos Ethyl	80.7	104	P/P	52 - 122
2319561	Chlorpyrifos Methyl	101	134	P/F	66 - 117
2319561	Coumaphos	163	213	P/P	50 - 220
2319561	Cyanazine	112	155	P/P	43 - 245
2319561	Cyprodinil	95.7	129	P/P	50 - 150
2319561	Demeton	65.4	80.7	P/P	43 - 188
2319561	Diazinon	95.2	126	P/P	69 - 131
2319561	Difenoconazole	174	235	P/F	34 - 231
2319561	Dimethenamid	75.4	101	P/P	55 - 118
2319561	Dimethomorph	80.0	114	P/P	50 - 150
2319561	Disulfoton	73.3	98.8	P/P	38 - 141
2319561	Dithiopyr	93.5	115	P/P	42 - 116
2319561	EPTC	31.1	40.8	P/P	18 - 85.0
2319561	Ethion	76.4	93.0	P/P	10 - 131
2319561	Ethoprop	80.2	108	P/P	65 - 129
2319561	Etridiazole	50.0	64.1	P/P	50 - 150
2319561	Fenamiphos	82.5	123	P/P	31 - 137
2319561	Fenbuconazole	133	159	P/P	57 - 160
2319561	Fipronil	99.2	133	P/F	62 - 132
2319561	Fipronil Desulfinyl	92.4	129	P/P	57 - 131
2319561	Fipronil Sulfide	83.0	111	P/P	15 - 138
2319561	Fipronil Sulfone	80.0	108	P/P	21 - 134
2319561	Fluazifop-P-butyl	91.6	109	P/P	54 - 133
2319561	Fludioxonil	92.2	116	P/P	58 - 127
2319561	Flumioxazin	201	269	P/P	33 - 300
2319561	Flutolanil	90.5	114	P/P	42 - 130
2319561	Fluxapyroxad	112	125	P/P	23 - 141
2319561	Fonofos	77.2	100	P/P	58 - 119
2319561	Hexazinone	91.2	120	P/P	68 - 172
2319561	Imazalil	82.3	101	P/P	48 - 283
2319561	Iprodione	117	146	P/F	38 - 140
2319561	Loratadine	67.3	100	P/P	50 - 150
2319561	Malathion	90.9	117	P/P	40 - 137
2319561	Metalaxyl	78.2	102	P/P	21 - 129
2319561	Metolachlor	84.4	106	P/P	55 - 122
2319561	Metribuzin	85.3	111	P/P	38 - 187
2319561	Mevinphos	63.7	86.8	P/P	54 - 134
2319561	Molinate	54.8	64.3	P/P	41 - 97.0
2319561	Myclobutanil	108	136	P/F	56 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P412504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319561	Naled	78.3	77.7	P/P	10 - 108
2319561	Napropamide	72.8	90.8	P/P	50 - 150
2319561	Norflurazon	115	141	P/F	32 - 122
2319561	Oxybenzone	76.7	85.9	P/P	59 - 147
2319561	Oxyfluorfen	110	138	P/P	61 - 153
2319561	Parathion Ethyl	86.1	119	P/P	59 - 130
2319561	Parathion Methyl	106	146	P/P	65 - 155
2319561	Pendimethalin	92.2	123	P/P	49 - 138
2319561	Phenytoin	112	136	P/P	50 - 200
2319561	Phorate	57.3	72.2	P/P	54 - 161
2319561	Prodiamine	140	155	P/P	33 - 161
2319561	Prometon	99.7	124	P/P	48 - 140
2319561	Prometryn	90.2	119	P/P	55 - 134
2319561	Pronamide	101	129	P/P	66 - 137
2319561	Propanil	92.5	119	P/P	50 - 150
2319561	Propargite	139	171	P/P	50 - 200
2319561	Propiconazole	114	143	P/P	36 - 150
2319561	Pyraflufen Ethyl	115	134	P/P	50 - 150
2319561	Pyridaben	156	196	P/P	50 - 200
2319561	Pyriproxyfen	114	154	P/P	10 - 165
2319561	Simazine	79.1	110	P/P	57 - 145
2319561	Stiropfos	77.7	98.8	P/P	50 - 150
2319561	Sulfentrazone	111	133	P/P	34 - 140
2319561	Tebuconazole	74.5	107	P/P	10 - 127
2319561	Terbufos	88.4	120	P/P	59 - 138
2319561	Terbutylazine	86.1	112	P/P	68 - 119
2319561	Thiobencarb	81.8	104	P/P	50 - 150
2319561	Triadimefon	85.1	103	P/P	50 - 150

Reference Method: EPA 8270E

Batch ID: P413158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2322917	Octinoxate	78.4	79.2	P/P	25 - 150

Reference Method: EPA 8321B

Batch ID: P412403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319665	2,4-D	67.1	87.3	P/P	30 - 160
2319665	2,4,5-T	64.4	70.1	P/P	30 - 160
2319665	Acetaminophen	77.3	88.9	P/P	30 - 150
2319665	Acetamiprid	94.8	109	P/P	30 - 160
2319665	Afidopyropen	66.9	80.9	P/P	30 - 160
2319665	Bentazon	48.3	58.3	P/P	30 - 150
2319665	Benzovindiflupyr	79.7	93.8	P/P	30 - 160
2319665	Carbamazepine	84.8	103	P/P	30 - 160
2319665	Clothianidin	98.5	105	P/P	30 - 160
2319665	Dinotefuran	90.3	107	P/P	30 - 160
2319665	Diuron	82.6	96.7	P/P	30 - 160
2319665	Fenuron	97.9	118	P/P	30 - 160
2319665	Fluridone	78.8	94.0	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P412403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319665	Hydrocodone	93.9	111	P/P	30 - 160
2319665	Ibuprofen	64.6	70.9	P/P	30 - 160
2319665	Imazapyr	95.8	117	P/P	30 - 160
2319665	Imidacloprid	93.7	115	P/P	30 - 160
2319665	Linuron	63.2	72.8	P/P	30 - 160
2319665	Mandestrobin	82.1	95.1	P/P	30 - 160
2319665	MCCPP	80.7	92.4	P/P	30 - 160
2319665	Naproxen	44.3	78.3	P/P	30 - 160
2319665	Primidone	93.4	95.4	P/P	30 - 160
2319665	Pyraclostrobin	88.1	97.0	P/P	30 - 160
2319665	Thiamethoxam	97.3	119	P/P	30 - 160
2319665	Tolfenpyrad	39.9	51.7	P/P	30 - 160
2319665	Triclopyr	67.0	73.2	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P412505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319559	Acesulfame K	113	115	P/P	40 - 150
2319559	AMPA	81.6	85.9	P/P	40 - 150
2319559	Endothall	133	121	P/P	40 - 150
2319559	Glufosinate	108	101	P/P	40 - 150
2319559	Glyphosate	122	115	P/P	40 - 150
2319559	Sucralose	124	140	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P412810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319704	Fluoride	100	99.4	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P412974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319599	Organic Carbon	94.0	94.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319738	Color (true)	0.972	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319572	Turbidity	12.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319694	Calcium	1.77	Spike	P	0 - 20
2319694	Iron	2.54	Spike	P	0 - 20
2319694	Magnesium	2.31	Spike	P	0 - 20
2319694	Potassium	3.17	Spike	P	0 - 20
2319694	Sodium	1.72	Spike	P	0 - 20
2319694	Strontium	2.48	Spike	P	0 - 20
2319694	Tin	2.58	Spike	P	0 - 20
2319694	Titanium	2.12	Spike	P	0 - 20
2319694	Vanadium	2.76	Spike	P	0 - 20
2319694	Zinc	2.67	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319694	Aluminum	6.29	Spike	P	0 - 20
2319694	Antimony	4.16	Spike	P	0 - 20
2319694	Arsenic	5.21	Spike	P	0 - 20
2319694	Barium	4.08	Spike	P	0 - 20
2319694	Beryllium	3.90	Spike	P	0 - 20
2319694	Boron	4.92	Spike	P	0 - 20
2319694	Cadmium	3.33	Spike	P	0 - 20
2319694	Chromium	4.73	Spike	P	0 - 20
2319694	Cobalt	5.13	Spike	P	0 - 20
2319694	Copper	4.77	Spike	P	0 - 20
2319694	Lead	5.22	Spike	P	0 - 20
2319694	Manganese	4.16	Spike	P	0 - 20
2319694	Molybdenum	4.90	Spike	P	0 - 20
2319694	Nickel	5.04	Spike	P	0 - 20
2319694	Selenium	3.77	Spike	P	0 - 20
2319694	Silver	1.72	Spike	P	0 - 20
2319694	Thallium	6.57	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319726	Chloride	0.748	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319726	Sulfate	1.37	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319739	Ammonia-N	0.148	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319291	Kjeldahl Nitrogen	4.79	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319710	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319805	Total-P	1.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P412434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319717	O-Phosphate-P	1.51	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P412504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319561	Acetochlor	20.8	Spike	P	0 - 27
2319561	Alachlor	25.5	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P412504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319561	Ametryn	13.7	Spike	P	0 - 34
2319561	Atrazine	26.9	Spike	P	0 - 41
2319561	Atrazine Desethyl	8.84	Spike	P	0 - 38
2319561	Avobenzone	9.55	Spike	P	0 - 30
2319561	Azinphos Methyl	19.0	Spike	P	0 - 62
2319561	Azoxystrobin	21.2	Spike	P	0 - 32
2319561	Bromacil	21.1	Spike	P	0 - 30
2319561	Butylate	23.4	Spike	P	0 - 59
2319561	Caffeine	1.07	Spike	P	0 - 60
2319561	Carbophenothion	20.5	Spike	P	0 - 25
2319561	Carfentrazone Ethyl	22.5	Spike	P	0 - 26
2319561	Chlorfenapyr	27.5	Spike	P	0 - 30
2319561	Chlorpyrifos Ethyl	24.8	Spike	P	0 - 27
2319561	Chlorpyrifos Methyl	27.3	Spike	F	0 - 26
2319561	Coumaphos	26.4	Spike	P	0 - 30
2319561	Cyanazine	32.0	Spike	P	0 - 58
2319561	Cyprodinil	29.6	Spike	P	0 - 30
2319561	Demeton	20.9	Spike	P	0 - 25
2319561	Diazinon	28.0	Spike	P	0 - 29
2319561	Difenoconazole	30.2	Spike	F	0 - 25
2319561	Dimethenamid	29.2	Spike	P	0 - 30
2319561	Dimethomorph	35.3	Spike	F	0 - 30
2319561	Disulfoton	29.7	Spike	P	0 - 33
2319561	Dithiopyr	20.4	Spike	P	0 - 22
2319561	EPTC	27.2	Spike	P	0 - 38
2319561	Ethion	19.6	Spike	P	0 - 79
2319561	Ethoprop	29.2	Spike	F	0 - 23
2319561	Etridiazole	24.7	Spike	P	0 - 30
2319561	Fenamiphos	39.1	Spike	P	0 - 58
2319561	Fenbuconazole	17.9	Spike	P	0 - 37
2319561	Fipronil	29.1	Spike	P	0 - 33
2319561	Fipronil Desulfinyl	31.8	Spike	F	0 - 26
2319561	Fipronil Sulfide	29.1	Spike	P	0 - 37
2319561	Fipronil Sulfone	27.7	Spike	P	0 - 50
2319561	Fluazifop-P-butyl	16.9	Spike	P	0 - 24
2319561	Fludioxonil	21.9	Spike	P	0 - 26
2319561	Flumioxazin	29.1	Spike	P	0 - 37
2319561	Flutolanil	22.6	Spike	P	0 - 26
2319561	Fluxapyroxad	8.72	Spike	P	0 - 34
2319561	Fonofos	26.2	Spike	P	0 - 27
2319561	Hexazinone	25.8	Spike	P	0 - 36
2319561	Imazalil	20.3	Spike	P	0 - 65
2319561	Iprodione	22.1	Spike	P	0 - 33
2319561	Loratadine	39.1	Spike	F	0 - 30
2319561	Malathion	25.1	Spike	P	0 - 44
2319561	Metalaxyl	26.8	Spike	P	0 - 38
2319561	Metolachlor	22.2	Spike	P	0 - 36
2319561	Metribuzin	26.4	Spike	P	0 - 63
2319561	Mevinphos	30.8	Spike	F	0 - 26
2319561	Molinate	15.9	Spike	P	0 - 40
2319561	Myclobutanil	22.4	Spike	F	0 - 21

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P412504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319561	Naled	0.700	Spike	P	0 - 26
2319561	Napropamide	22.0	Spike	P	0 - 30
2319561	Norflurazon	18.8	Spike	P	0 - 24
2319561	Oxadiazon	25.2	Spike	P	0 - 27
2319561	Oxybenzone	11.3	Spike	P	0 - 30
2319561	Oxyfluorfen	22.5	Spike	P	0 - 24
2319561	Parathion Ethyl	32.4	Spike	F	0 - 28
2319561	Parathion Methyl	31.2	Spike	F	0 - 27
2319561	Pendimethalin	28.7	Spike	P	0 - 31
2319561	Phenytoin	18.9	Spike	P	0 - 30
2319561	Phorate	23.0	Spike	P	0 - 27
2319561	Prodiamine	9.79	Spike	P	0 - 52
2319561	Prometon	21.7	Spike	P	0 - 31
2319561	Prometryn	27.7	Spike	P	0 - 28
2319561	Pronamide	24.2	Spike	P	0 - 26
2319561	Propanil	25.0	Spike	P	0 - 30
2319561	Propargite	20.5	Spike	P	0 - 30
2319561	Propiconazole	23.1	Spike	P	0 - 31
2319561	Pyraflufen Ethyl	15.1	Spike	P	0 - 30
2319561	Pyridaben	22.8	Spike	P	0 - 30
2319561	Pyriproxyfen	29.6	Spike	P	0 - 50
2319561	Simazine	28.4	Spike	P	0 - 29
2319561	Stirophos	23.9	Spike	P	0 - 30
2319561	Sulfentrazone	15.1	Spike	P	0 - 33
2319561	Tebuconazole	34.4	Spike	P	0 - 44
2319561	Terbufos	30.3	Spike	F	0 - 29
2319561	Terbuthylazine	26.3	Spike	P	0 - 27
2319561	Thiobencarb	24.4	Spike	P	0 - 30
2319561	Triadimefon	18.9	Spike	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P413158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2322917	Octinoxate	1.06	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319665	2,4-D	26.1	Spike	P	0 - 30
2319665	2,4,5-T	8.35	Spike	P	0 - 30
2319665	Acetaminophen	14.0	Spike	P	0 - 30
2319665	Acetamiprid	14.0	Spike	P	0 - 30
2319665	Afidopyropen	18.9	Spike	P	0 - 30
2319665	Bentazon	18.8	Spike	P	0 - 30
2319665	Benzovindiflupyr	16.2	Spike	P	0 - 30
2319665	Carbamazepine	19.3	Spike	P	0 - 30
2319665	Clothianidin	6.69	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P412403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319665	Dinotefuran	17.1	Spike	P	0 - 30
2319665	Diuron	15.7	Spike	P	0 - 30
2319665	Fenuron	18.6	Spike	P	0 - 30
2319665	Fluridone	17.6	Spike	P	0 - 30
2319665	Hydrocodone	17.1	Spike	P	0 - 30
2319665	Ibuprofen	9.35	Spike	P	0 - 30
2319665	Imazapyr	19.6	Spike	P	0 - 30
2319665	Imidacloprid	20.5	Spike	P	0 - 30
2319665	Linuron	14.1	Spike	P	0 - 30
2319665	Mandestrobin	14.7	Spike	P	0 - 30
2319665	MCPPP	13.5	Spike	P	0 - 30
2319665	Naproxen	55.6	Spike	F	0 - 30
2319665	Primidone	2.18	Spike	P	0 - 30
2319665	Pyraclostrobin	9.60	Spike	P	0 - 30
2319665	Thiamethoxam	20.3	Spike	P	0 - 30
2319665	Tolfenpyrad	25.8	Spike	P	0 - 30
2319665	Triclopyr	8.81	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319559	Acesulfame K	1.93	Spike	P	0 - 30
2319559	AMPA	4.44	Spike	P	0 - 30
2319559	Endothall	9.11	Spike	P	0 - 30
2319559	Glufosinate	6.04	Spike	P	0 - 30
2319559	Glyphosate	4.75	Spike	P	0 - 30
2319559	Sucralose	5.27	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P412807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319704	Total Alkalinity	0.146	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P413061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319726	TDS	4.49	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319704	Fluoride	0.476	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P412974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319599	Organic Carbon	0.494	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2319743
Field Sample ID: 20030316

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	83.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	79.5	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.7	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	145	P	30 - 160

Lab Sample ID: 2319745
Field Sample ID: 20030316

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	123	P	20 - 200
EPA 8270E	Simazine-d10	126	P	71 - 140
EPA 8270E	Terbufos-d10	108	P	62 - 131
EPA 8270E	Terphenyl-d14	106	P	50 - 124
EPA 8270E	Terphenyl-d14	69.9	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A111504

Included Lab Sample IDs: 2319740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.5	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A111505

Included Lab Sample IDs: 2319738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111506

Included Lab Sample IDs: 2319738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111572

Included Lab Sample IDs: 2319739

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111574

Included Lab Sample IDs: 2319739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111585

Included Lab Sample IDs: 2319744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.7	101	P/P	90 - 110
Antimony	100	99.6	P/P	90 - 110
Arsenic	97.5	101	P/P	90 - 110
Barium	98.6	100	P/P	90 - 110
Beryllium	94.8	98.8	P/P	90 - 110
Boron	102	98.9	P/P	90 - 110
Cadmium	100	98.9	P/P	90 - 110
Chromium	98.5	99.1	P/P	90 - 110
Cobalt	97.3	102	P/P	90 - 110
Copper	95.2	101	P/P	90 - 110
Lead	97.3	98.2	P/P	90 - 110
Manganese	100	100	P/P	90 - 110
Molybdenum	97.7	98.8	P/P	90 - 110
Nickel	95.6	102	P/P	90 - 110
Selenium	100	99.6	P/P	90 - 110
Silver	104	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111585

Included Lab Sample IDs: 2319744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	96.7	96.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111606

Included Lab Sample IDs: 2319743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.5	93.2	P/P	60 - 160
Sucralose	105	104	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111608

Included Lab Sample IDs: 2319743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.4	85.6	P/P	60 - 160
Endothall	103	102	P/P	60 - 160
Glufosinate	89.7	95.0	P/P	60 - 160
Glyphosate	110	115	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A111656

Included Lab Sample IDs: 2319738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.9	97.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111656

Included Lab Sample IDs: 2319738

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: A111687

Included Lab Sample IDs: 2319744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.8	99.0	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	100	99.8	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Strontium	106	107	P/P	90 - 110
Tin	100	98.3	P/P	90 - 110
Titanium	99.6	99.0	P/P	90 - 110
Vanadium	101	100	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111715

Included Lab Sample IDs: 2319738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	100	P/P	90 - 110
Sulfate	99.9	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111730

Included Lab Sample IDs: 2319739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	97.4	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A111761

Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	95.9		P	80 - 120
Ametryn	80.8		P	80 - 120
Atrazine	100		P	80 - 120
Atrazine Desethyl	96.0		P	80 - 120
Azinphos Methyl	92.5		P	80 - 120
Butylate	91.0		P	80 - 120
Caffeine	95.3		P	80 - 120
Carbophenothion	120		P	80 - 120
Carfentrazone Ethyl	98.2		P	80 - 120
Chlorfenapyr	113		P	80 - 120
Chlorpyrifos Ethyl	116		P	80 - 120
Chlorpyrifos Methyl	109		P	80 - 120
Coumaphos	106		P	80 - 120
Cyanazine	101		P	80 - 120
Cyprodinil	93.8		P	80 - 120
Demeton	107		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	93.4		P	80 - 120
Dimethenamid	102		P	80 - 120
Dimethomorph	99.6		P	80 - 120
Disulfoton	106		P	80 - 120
Dithiopyr	96.3		P	80 - 120
EPTC	97.4		P	80 - 120
Ethion	109		P	80 - 120
Ethoprop	95.3		P	80 - 120
Etridiazole	96.8		P	80 - 120
Fenamiphos	113		P	80 - 120
Fenbuconazole	101		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	99.2		P	80 - 120
Fipronil Sulfide	112		P	80 - 120
Fipronil Sulfone	113		P	80 - 120
Fluazifop-P-butyl	98.4		P	80 - 120
Fludioxonil	102		P	80 - 120
Flumioxazin	92.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111761
Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Flutolanil	92.1		P	80 - 120
Fluxapyroxad	92.4		P	80 - 120
Fonofos	105		P	80 - 120
Hexazinone	99.8		P	80 - 120
Imazalil	82.8		P	80 - 120
Iprodione	91.8		P	80 - 120
Loratadine	108		P	80 - 120
Malathion	112		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	92.8		P	80 - 120
Molinate	95.4		P	80 - 120
Myclobutanil	102		P	80 - 120
Naled	118		P	80 - 120
Napropamide	95.7		P	80 - 120
Oxadiazon	98.7		P	80 - 120
Oxyfluorfen	95.8		P	80 - 120
Parathion Ethyl	103		P	80 - 120
Parathion Methyl	98.1		P	80 - 120
Pendimethalin	86.2		P	80 - 120
Phenytoin	104		P	80 - 120
Phorate	107		P	80 - 120
Prodiamine	98.1		P	80 - 120
Prometon	93.3		P	80 - 120
Prometryn	93.4		P	80 - 120
Pronamide	93.7		P	80 - 120
Propanil	104		P	80 - 120
Propargite	98.9		P	80 - 120
Propiconazole	94.1		P	80 - 120
Pyraflufen Ethyl	94.0		P	80 - 120
Pyriproxyfen	93.0		P	80 - 120
Simazine	96.7		P	80 - 120
Stirophos	113		P	80 - 120
Sulfentrazone	93.2		P	80 - 120
Tebuconazole	94.8		P	80 - 120
Terbufos	102		P	80 - 120
Terbuthylazine	99.5		P	80 - 120
Thiobencarb	101		P	80 - 120
Triadimefon	103		P	80 - 120

Reference Method: EPA 8321B
Run ID: A111767
Included Lab Sample IDs: 2319743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.8	80.5	P/P	50 - 150
2,4,5-T	94.5	76.0	P/P	50 - 150
Acetaminophen	79.7	79.7	P/P	60 - 160
Acetamiprid	98.7	98.4	P/P	50 - 150
Afidopyropen	77.3	80.8	P/P	50 - 150
Bentazon	93.9	95.7	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A111767
Included Lab Sample IDs: 2319743

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Benzovindiflupyr	101	94.8	P/P	50 - 150
Carbamazepine	97.4	90.4	P/P	60 - 150
Clothianidin	94.3	89.3	P/P	60 - 150
Dinotefuran	79.1	75.2	P/P	50 - 150
Diuron	93.3	94.1	P/P	60 - 160
Fenuron	96.0	97.1	P/P	60 - 150
Fluridone	102	101	P/P	60 - 160
Hydrocodone	98.8	90.3	P/P	60 - 150
Ibuprofen	66.9	73.1	P/P	50 - 160
Imazapyr	91.1	80.4	P/P	50 - 150
Imidacloprid	89.4	92.7	P/P	60 - 150
Linuron	94.1	97.5	P/P	60 - 150
Mandestrobin	99.8	99.8	P/P	50 - 150
MCPP	85.9	85.4	P/P	50 - 150
Naproxen	125	84.0	P/P	50 - 160
Primidone	90.7	88.9	P/P	60 - 150
Pyraclostrobin	109	108	P/P	60 - 150
Thiamethoxam	92.2	94.2	P/P	50 - 150
Tolfenpyrad	96.3	88.9	P/P	60 - 150
Triclopyr	97.2	82.5	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111780
Included Lab Sample IDs: 2319739

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

Reference Method: EPA 8270E
Run ID: A111805
Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azoxystrobin	95.8		P	80 - 120
Bromacil	101		P	80 - 120
Metalaxyl	98.3		P	80 - 120
Norflurazon	98.3		P	80 - 120
Pyridaben	95.6		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A111850
Included Lab Sample IDs: 2319739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	96.1	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A112034
Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112034
Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Octinoxate	90.4		P	80 - 120

Reference Method: EPA 8270E
Run ID: A112093
Included Lab Sample IDs: 2319745

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	98.2		P	80 - 120
Oxybenzone	98.5		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			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	101					0.972	
EPA 180.1 Rev. 2.0	Turbidity	96.3					12.0	
EPA 200.7 Rev. 4.4	Calcium	103	106	109				1.77
	Iron	106	104	107	109			2.54
	Magnesium	108	107	109	112			2.31
	Potassium	101	108	112				3.17
	Sodium	105	96.4	108	110			1.72
	Strontium	106	104	112	115			2.48
	Tin	97.8	96.7	99.3	102			2.58
	Titanium	97.4	95.3	96.3	98.6			2.12
	Vanadium	93.4	94.2	95.1	97.7			2.76
	Zinc	99.1	98.2	102	104			2.67
EPA 200.8 Rev. 5.4	Aluminum	99.8	99.0	97.2	105			6.29
	Antimony	99.1	104	98.0	102			4.16
	Arsenic	99.9	102	95.1	100			5.21
	Barium	103	106	101	105			4.08
	Beryllium	95.7	97.4	92.3	96.3			3.90
	Boron	100	103	102	107			4.92
	Cadmium	96.8	101	99.2	103			3.33
	Chromium	98.4	103	97.1	102			4.73
	Cobalt	101	102	95.0	100			5.13
	Copper	97.4	95.6	93.0	97.5			4.77
	Lead	99.9	98.6	104	103			5.22
	Manganese	98.4	103	97.0	103			4.16
	Molybdenum	99.2	106	96.9	102			4.90
	Nickel	98.5	98.4	93.8	98.7			5.04
	Selenium	99.2	101	94.2	97.8			3.77
	Silver	103	102	102	104			1.72
	Thallium	102	109	99.7	107			6.57
EPA 300.0 Rev. 2.1	Chloride	98.4	96.9	96.6			0.748	
	Sulfate	97.0	96.8				1.37	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	97.4	97.6				0.148
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6	96.5	101				4.79
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	97.0	97.0				0.0
EPA 365.1 Rev. 2.0	Total-P	104	102	104				1.77
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	97.9	99.7				1.51
EPA 8270E	Acetochlor	84.4	87.0	107				20.8
	Alachlor	75.8	80.3	104				25.5
	Ametryn	90.4	104	119				13.7
	Atrazine	109						26.9
	Atrazine Desethyl	52.5	58.6	52.8				8.84
	Avobenzone	90.4	89.8	81.6				9.55
	Azinphos Methyl	129	171	206				19.0
	Azoxystrobin	91.9	113	143				21.2
	Bromacil	78.1	83.9	104				21.1
	Butylate	51.3	34.0	43.0				23.4
	Caffeine	75.5	79.5	80.3				1.07
	Carbophenothion	93.3	117	144				20.5
	Carfentrazone Ethyl	103	114	143				22.5
	Chlorfenapyr	74.5	66.6	87.9				27.5
	Chlorpyrifos Ethyl	69.0	80.7	104				24.8
	Chlorpyrifos Methyl	84.1	101	134				27.3
	Coumaphos	144	163	213				26.4
	Cyanazine	116	112	155				32.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Cyprodinil	90.8	95.7	129		29.6
	Demeton	60.9	65.4	80.7		20.9
	Diazinon	98.8	95.2	126		28.0
	Difenoconazole	167	174	235		30.2
	Dimethenamid	71.3	75.4	101		29.2
	Dimethomorph	96.4	80.0	114		35.3
	Disulfoton	86.2	73.3	98.8		29.7
	Dithiopyr	73.8	93.5	115		20.4
	EPTC	46.4	31.1	40.8		27.2
	Ethion	63.9	76.4	93.0		19.6
	Ethoprop	69.4	80.2	108		29.2
	Etridiazole	55.6	50.0	64.1		24.7
	Fenamiphos	83.3	82.5	123		39.1
	Fenbuconazole	119	133	159		17.9
	Fipronil	89.7	99.2	133		29.1
	Fipronil Desulfinyl	88.2	92.4	129		31.8
	Fipronil Sulfide	70.4	83.0	111		29.1
	Fipronil Sulfone	70.5	80.0	108		27.7
	Fluazifop-P-butyl	92.3	91.6	109		16.9
	Fludioxonil	82.6	92.2	116		21.9
	Flumioxazin	212	201	269		29.1
	Flutolanil	80.7	90.5	114		22.6
	Fluxapyroxad	79.3	112	125		8.72
	Fonofos	81.4	77.2	100		26.2
	Hexazinone	76.0	91.2	120		25.8
	Imazalil	91.3	82.3	101		20.3
	Iprodione	91.0	117	146		22.1
	Loratadine	88.6	67.3	100		39.1
	Malathion	79.5	90.9	117		25.1
	Metalaxyl	70.2	78.2	102		26.8
	Metolachlor	72.3	84.4	106		22.2
	Metribuzin	77.8	85.3	111		26.4
	Mevinphos	58.7	63.7	86.8		30.8
	Molinate	59.1	54.8	64.3		15.9
	Myclobutanil	92.1	108	136		22.4
	Naled	70.8	78.3	77.7		0.700
	Napropamide	59.3	72.8	90.8		22.0
	Norflurazon	97.2	115	141		18.8
	Octinoxate	70.4	78.4	79.2		1.06
	Oxadiazon	98.9				25.2
	Oxybenzone	64.4	76.7	85.9		11.3
	Oxyfluorfen	105	110	138		22.5
	Parathion Ethyl	77.8	86.1	119		32.4
	Parathion Methyl	103	106	146		31.2
	Pendimethalin	88.1	92.2	123		28.7
	Phenytol	78.0	112	136		18.9
	Phorate	52.1	57.3	72.2		23.0
	Prodiamine	127	140	155		9.79
	Prometon	80.5	99.7	124		21.7
	Prometryn	83.2	90.2	119		27.7
	Pronamide	85.4	101	129		24.2
	Propanil	84.4	92.5	119		25.0
	Propargite	115	139	171		20.5
	Propiconazole	92.6	114	143		23.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Pyraflufen Ethyl	95.9	115	134		15.1
	Pyridaben	139	156	196		22.8
	Pyriproxyfen	65.1	114	154		29.6
	Simazine	87.3	79.1	110		28.4
	Stirophos	72.1	77.7	98.8		23.9
	Sulfentrazone	118	111	133		15.1
	Tebuconazole	94.9	74.5	107		34.4
	Terbufos	96.4	88.4	120		30.3
	Terbuthylazine	81.8	86.1	112		26.3
	Thiobencarb	72.8	81.8	104		24.4
	Triadimefon	65.5	85.1	103		18.9
EPA 8321B	2,4-D	77.5	67.1	87.3		26.1
	2,4,5-T	67.0	64.4	70.1		8.35
	Acesulfame K	115	113	115		1.93
	Acetaminophen	56.6	77.3	88.9		14.0
	Acetamiprid	91.6	94.8	109		14.0
	Afidopyropen	53.3	66.9	80.9		18.9
	AMPA	98.9	81.6	85.9		4.44
	Bentazon	51.0	48.3	58.3		18.8
	Benzovindiflupyr	80.4	79.7	93.8		16.2
	Carbamazepine	92.3	84.8	103		19.3
	Clothianidin	95.3	98.5	105		6.69
	Dinotefuran	82.2	90.3	107		17.1
	Diuron	90.6	82.6	96.7		15.7
	Endothall	132	133	121		9.11
	Fenuron	112	97.9	118		18.6
	Fluridone	84.8	78.8	94.0		17.6
	Glufosinate	93.2	108	101		6.04
	Glyphosate	119	122	115		4.75
	Hydrocodone	88.5	93.9	111		17.1
	Ibuprofen	72.1	64.6	70.9		9.35
	Imazapyr	79.4	95.8	117		19.6
	Imidacloprid	92.5	93.7	115		20.5
	Linuron	66.6	63.2	72.8		14.1
	Mandestrobin	92.0	82.1	95.1		14.7
	MCPP	86.6	80.7	92.4		13.5
	Naproxen	59.3	44.3	78.3		55.6
	Primidone	90.6	93.4	95.4		2.18
	Pyraclostrobin	86.1	88.1	97.0		9.60
	Sucralose	124	124	140		5.27
	Thiamethoxam	87.5	97.3	119		20.3
	Tolfenpyrad	51.8	39.9	51.7		25.8
	Triclopyr	67.0	67.0	73.2		8.81
SM 2320 B-2011	Total Alkalinity	96.6			0.146	
SM 2540 C-2011	TDS				4.49	
SM 4500-F- C-2011	Fluoride	99.6	100	99.4		0.476
SM 5310 B-2011	Organic Carbon	96.0	94.0	94.8		0.494

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2319738
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2319738

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2319744
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2319744
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2319738
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2319738
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2319739
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2319739
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2319739
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2319739
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2319740
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2319745
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2319745
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2319743
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2319738
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2319744
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2319738
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2319738
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2319738
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2319739

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	04/15/2022			04/15/2022 16:24	Anna M. Plaviak	2319738
EPA 180.1 Rev. 2.0	04/15/2022			04/15/2022 14:07	Khloe J Berg	2319738
EPA 200.7 Rev. 4.4	04/15/2022	04/19/2022 10:55	Megan Whitefoot	04/25/2022 22:09	McKinley C Carter	2319744
EPA 200.8 Rev. 5.4	04/15/2022	04/19/2022 10:55	Megan Whitefoot	04/20/2022 18:51	Alexander Thompson	2319744
EPA 300.0 Rev. 2.1	04/15/2022			04/26/2022 16:23	Anna M. Plaviak	2319738
EPA 350.1 Rev. 2.0	04/15/2022			04/20/2022 11:17	Ping Hua	2319739
EPA 351.2 Rev. 2.0	04/15/2022	04/28/2022 09:58	Samantha L Bates	05/02/2022 11:33	Alexandra J Mattheus	2319739
EPA 353.2 Rev. 2.0	04/15/2022			04/19/2022 16:46	Nathaniel J Jones	2319739
EPA 365.1 Rev. 2.0	04/15/2022	04/26/2022 14:30	Simonne.V. Calhoun	04/27/2022 16:41	Sarah A Nixon	2319739
EPA 365.1 Rev. 2.0 dissolved	04/15/2022			04/15/2022 14:52	James L Waggeberby	2319740
EPA 8270E	04/15/2022	04/19/2022 10:00	Rasheda Ghaffari	04/26/2022 20:15	Michael Poppell	2319745
	04/15/2022	04/19/2022 10:00	Rasheda Ghaffari	04/28/2022 17:19	Michael Poppell	2319745
	04/15/2022	04/19/2022 10:00	Rasheda Ghaffari	04/28/2022 17:42	Arthur Maknenko	2319745
	04/15/2022	04/19/2022 10:00	Rasheda Ghaffari	04/28/2022 17:46	Michael Poppell	2319745
	04/15/2022	05/03/2022 08:00	Fe-Val Siddell	05/06/2022 02:51	Lipi Saha	2319745
EPA 8321B	04/15/2022	04/18/2022 10:00	June Rhew	04/22/2022 06:55	Juyoung Kim	2319743
	04/15/2022	04/19/2022 10:00	Umesh Chiluwal	04/19/2022 15:23	Manjita Shrestha	2319743
	04/15/2022	04/19/2022 10:00	Umesh Chiluwal	04/20/2022 05:33	Manjita Shrestha	2319743
SM 2320 B-2011	04/15/2022			04/22/2022 05:02	Sarah A Nixon	2319738
SM 2340 B-2011	04/15/2022			04/25/2022 22:09	McKinley C Carter	2319744
SM 2540 C-2011	04/15/2022			04/20/2022 15:36	Yijie Li	2319738
SM 2540 D-2011	04/15/2022			04/20/2022 15:36	Yijie Li	2319738
SM 4500-F- C-2011	04/15/2022			04/22/2022 05:02	Sarah A Nixon	2319738
SM 5310 B-2011	04/15/2022			04/19/2022 23:30	Judith K. Clark	2319739