

Chemical Analysis Report

CEN-DIST-2022-02-11-01

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

Event Description: **Little With SCI + additional site**
Request ID: **RQ-2022-02-07-22**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 08-MAR-2022 10:33

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the top of the "T".

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: Little Withlacoochee near confluence with Withlacoochee

Collection Date/Time: 02/10/2022 11:50

Field ID: G4CE0226

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305249	DEP SOP: NU-094-1	Color (true)**	110		PCU	P409755	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P409760	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P410027	
		Sulfate	1.6		mg SO4/L	P410029	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P409896	
	SM 2540 C-2011	TDS	162	A	mg/L	P410160	
	SM 2540 D-2011	TSS	3	IA	mg/L	P410191	
	SM 4500 F-C-2011	Fluoride	0.066	I	mg F/L	P409906	
2305250	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P410311	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P409730	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P410169	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P409832	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P410394	
2305251	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P409749	
2305255	EPA 8321B	2,4-D	0.0020	U	ug/L	P409686	
		Acesulfame K	0.10	U	ug/L	P409687	
		2,4,5-T	0.0040	U	ug/L	P409686	
		AMPA	0.10	U	ug/L	P409687	
		Acetaminophen	0.0080	U	ug/L	P409686	
		Acetamiprid	0.0020	U	ug/L	P409686	
		Endothall	0.25	U	ug/L	P409687	
		Glufosinate	0.10	U	ug/L	P409687	
		Glyphosate	0.10	U	ug/L	P409687	
		Afidopyropen	0.0020	U	ug/L	P409686	
		Bentazon	0.0018	I	ug/L	P409686	
		Sucralose	0.028	I	ug/L	P409687	
		Benzovindiflupyr	0.0020	U	ug/L	P409686	
		Carbamazepine	8.0E-04	U	ug/L	P409686	
		Clothianidin	0.0020	U	ug/L	P409686	MS
		Dinotefuran	0.0020	U	ug/L	P409686	MS
		Diuron	0.0020	U	ug/L	P409686	
		Fenuron	0.078		ug/L	P409686	
		Fluridone	0.040		ug/L	P409686	
		Imazapyr	0.0075	I	ug/L	P409686	
		Hydrocodone	0.0020	U	ug/L	P409686	
		Ibuprofen	0.020	U	ug/L	P409686	
		Imidacloprid	0.0020	U	ug/L	P409686	MS
		Linuron	0.0040	U	ug/L	P409686	
		Mandestrobin	0.0020	U	ug/L	P409686	
		MCP	0.0040	U	ug/L	P409686	MS
		Naproxen	0.0080	U	ug/L	P409686	
		Primidone	0.0040	U	ug/L	P409686	MS

Field ID: G4CE0226

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305255	EPA 8321B	Pyraclostrobin	0.0020	U	ug/L	P409686	
		Thiamethoxam	0.0020	U	ug/L	P409686	MS
		Tolfenpyrad	0.0020	UJ	ug/L	P409686	CCV
		Triclopyr	0.0040	UJ	ug/L	P409686	CCV, MS, RPD
2305256	EPA 200.7 Rev. 4.4	Barium	6.4		ug/L	P409769	
		Calcium	45.0		mg/L	P409769	
		Iron	640		ug/L	P409769	
		Magnesium	2.07		mg/L	P409769	
		Manganese	11.9		ug/L	P409769	
		Potassium	0.53	I	mg/L	P409769	
		Sodium	7.5		mg/L	P409769	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409769	
		Aluminum	60		ug/L	P409769	
		Antimony	0.050	U	ug/L	P409769	
		Arsenic	0.42		ug/L	P409769	
		Boron**	20.4		ug/L	P409769	
		Cadmium	0.020	U	ug/L	P409769	
		Chromium	0.40	U	ug/L	P409769	
		Copper	0.40	U	ug/L	P409769	
		Lead	0.20	U	ug/L	P409769	
		Nickel	0.51	I	ug/L	P409769	
		Selenium	0.20	U	ug/L	P409769	MS
		Silver	0.010	U	ug/L	P409769	
		Thallium	0.10	U	ug/L	P409769	
	SM 2340B	Hardness	121		mg/L	P409769	
2305257	EPA 8270E	Oxybenzone**	9.5	U	ng/L	P409681	
		Acetochlor	0.24	U	ng/L	P409681	
		Octinoxate**	19	U	ng/L	P409681	
		Alachlor	0.24	U	ng/L	P409681	
		Avobenzone**	95	U	ng/L	P409681	
		Ametryn	0.57	U	ng/L	P409681	
		Atrazine	0.35	I	ng/L	P409681	
		Atrazine Desethyl	1.4	U	ng/L	P409681	
		Azinphos Methyl	1.9	U	ng/L	P409681	
		Azoxystrobin**	0.47	U	ng/L	P409681	
		Bromacil	0.47	U	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**	0.095	U	ng/L	P409681	
		Chlorfenapyr**	0.17	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	

Field ID: G4CE0226

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305257	EPA 8270E	Cyanazine	3.1	U	ng/L	P409681	
		Cyprodinil**	0.095	U	ng/L	P409681	
		Demeton	1.4	U	ng/L	P409681	
		Diazinon	0.12	U	ng/L	P409681	
		Difenoconazole**	0.57	U	ng/L	P409681	
		Dimethenamid**	5.9		ng/L	P409681	
		Dimethomorph**	0.17	U	ng/L	P409681	
		Disulfoton	0.47	U	ng/L	P409681	
		Dithiopyr**	0.17	U	ng/L	P409681	
		EPTC	1.2	U	ng/L	P409681	
		Ethion	0.14	U	ng/L	P409681	
		Ethoprop	0.095	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 Desulfinyll**	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**	0.095	U	ng/L	P409681	
		Fludioxonil**	0.12	U	ng/L	P409681	
		Flumioxazin**	1.7	U	ng/L	P409681	
		Flutolanil**	0.095	U	ng/L	P409681	
		Fluxapyroxad**	0.27	I	ng/L	P409681	
		Fonofos	0.19	U	ng/L	P409681	
		Hexazinone	1.9	I	ng/L	P409681	
		Imazalil**	0.71	U	ng/L	P409681	
		Iprodione**	0.57	U	ng/L	P409681	
		Loratadine**	0.095	U	ng/L	P409681	
		Malathion	0.33	U	ng/L	P409681	
		Metalaxyl	0.71	U	ng/L	P409681	
		Metolachlor	0.33	U	ng/L	P409681	
		Metribuzin	2.4	U	ng/L	P409681	
		Mevinphos	1.0	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	0.47	U	ng/L	P409681	
		Oxadiazon	0.28	U	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	0.95	U	ng/L	P409681	
		Phenytain**	3.3	U	ng/L	P409681	

Field ID: G4CE0226

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2305257	EPA 8270E	Phorate	0.50	U	ng/L	P409681	
		Prodiamine**	0.17	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	
		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**	0.43	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**	7.8		ng/L	P409681	
		Tebuconazole**	0.47	U	ng/L	P409681	
		Terbufos	0.095	U	ng/L	P409681	
		Terbutylazine	0.40	U	ng/L	P409681	
		Thiobencarb**	0.57	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: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: MS accuracy for Dimethenamid 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: P409755

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

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: P409769

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: P410027

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

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: P410311

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409730

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409832

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409749

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
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P409681

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P409681

Component	Result	Code	Units
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	2.5	U	ng/L
Metribuzin	2.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P409681

Component	Result	Code	Units
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B
 Batch ID: P409686

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P409686

Component	Result	Code	Units
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	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	0.0040	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: P409687

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: P409896

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

Reference Method: SM 2540 C-2011

Batch ID: P410160

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P410191

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P410394

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: P409755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.0		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	106		P	85 - 115
Manganese	109		P	85 - 115
Potassium	109		P	85 - 115
Sodium	104		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	98.9		P	85 - 115
Arsenic	102		P	85 - 115
Boron	103		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	96.5		P	85 - 115
Copper	98.4		P	85 - 115
Lead	99.1		P	85 - 115
Nickel	104		P	85 - 115
Selenium	101		P	85 - 115
Silver	99.9		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.7		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P410311

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P409730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	92.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P410169

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P409832

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P409749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.9		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
Avobenzone	95.9		P	50 - 200
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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P409681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dimethenamid	72.5		P	64 - 115
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
Octinoxate	65.4		P	50 - 150
Oxadiazon	74.3		P	59 - 116
Oxybenzone	117		P	50 - 150
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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P409681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyriproxyfen	76.2		P	30 - 149
Simazine	72.8		P	72 - 125
Stirophos	70.0		P	29 - 164
Sulfentrazone	65.5		P	21 - 139
Tebuconazole	58.5		P	10 - 115
Terbufos	101		P	60 - 123
Terbutylazine	97.1		P	72 - 115
Thiobencarb	95.8		P	31 - 139
Triadimefon	90.0		P	65 - 116

Reference Method: EPA 8321B
Batch ID: P409686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	148		P	40 - 150
2,4,5-T	118		P	40 - 150
Acetaminophen	113		P	30 - 150
Acetamiprid	118		P	40 - 150
Afidopyropen	124		P	40 - 150
Bentazon	105		P	30 - 150
Benzovindiflupyr	147		P	40 - 150
Carbamazepine	136		P	40 - 150
Clothianidin	137		P	40 - 150
Dinotefuran	120		P	40 - 150
Diuron	112		P	40 - 150
Fenuron	104		P	40 - 150
Fluridone	119		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	130		P	40 - 150
Imazapyr	121		P	40 - 150
Imidacloprid	118		P	40 - 150
Linuron	103		P	40 - 150
Mandestrobin	105		P	40 - 150
MCPP	146		P	40 - 150
Naproxen	79.2		P	40 - 150
Primidone	135		P	40 - 150
Pyraclostrobin	97.0		P	40 - 150
Thiamethoxam	125		P	40 - 150
Tolfenpyrad	88.3		P	30 - 150
Triclopyr	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P409687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
AMPA	95.6		P	40 - 150
Endothall	68.0		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	101		P	40 - 150
Sucralose	93.5		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P409896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P409769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304833	Barium	110	104	P/P	80 - 120
2304833	Calcium	110		P	80 - 120
2304833	Iron	111	107	P/P	80 - 120
2304833	Magnesium	108		P	80 - 120
2304833	Manganese	112	106	P/P	80 - 120
2304833	Potassium	109	104	P/P	80 - 120
2304833	Sodium	107		P	80 - 120
2304833	Zinc	106	100	P/P	80 - 120
2305312	Barium	108		P	80 - 120
2305312	Calcium	109		P	80 - 120
2305312	Iron	109		P	80 - 120
2305312	Magnesium	109		P	80 - 120
2305312	Manganese	108		P	80 - 120
2305312	Potassium	106		P	80 - 120
2305312	Sodium	104		P	80 - 120
2305312	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P409769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304833	Aluminum	102	102	P/P	80 - 120
2304833	Antimony	103	102	P/P	80 - 120
2304833	Arsenic	103	103	P/P	80 - 120
2304833	Boron	110	111	P/P	80 - 120
2304833	Cadmium	102	104	P/P	80 - 120
2304833	Chromium	100	101	P/P	80 - 120
2304833	Copper	98.7	99.3	P/P	80 - 120
2304833	Lead	99.7	101	P/P	80 - 120
2304833	Nickel	102	101	P/P	80 - 120
2304833	Selenium	79.5	79.2	F/F	80 - 120
2304833	Silver	102	102	P/P	80 - 120
2304833	Thallium	106	108	P/P	80 - 120
2305312	Aluminum	102		P	80 - 120
2305312	Antimony	99.9		P	80 - 120
2305312	Arsenic	99.7		P	80 - 120
2305312	Boron	109		P	80 - 120
2305312	Cadmium	102		P	80 - 120
2305312	Chromium	99.0		P	80 - 120
2305312	Copper	97.8		P	80 - 120
2305312	Lead	100		P	80 - 120
2305312	Nickel	98.4		P	80 - 120
2305312	Selenium	99.7		P	80 - 120
2305312	Silver	98.6		P	80 - 120
2305312	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P410027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305105	Chloride	99.5		P	90 - 110
2305189	Chloride	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305105	Sulfate	99.9		P	90 - 110
2305189	Sulfate	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305213	Ammonia-N	97.0	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304615	Kjeldahl Nitrogen	97.5	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305270	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305270	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305216	O-Phosphate-P	98.7	100	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	Avobenzone	124	142	P/P	50 - 200
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

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	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
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	Octinoxate	92.7	99.4	P/P	50 - 150
2305257	Oxadiazon	78.6	84.3	P/P	40 - 119
2305257	Oxybenzone	116	128	P/P	50 - 150
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

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	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: P409686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305178	2,4-D	147	114	P/P	40 - 150
2305178	2,4,5-T	132	126	P/P	40 - 150
2305178	Acetaminophen	145	144	P/P	30 - 150
2305178	Acetamiprid	128	98.4	P/P	40 - 150
2305178	Afidopyropen	93.1	82.0	P/P	40 - 150
2305178	Bentazon	48.8	59.3	P/P	30 - 150
2305178	Benzovindiflupyr	111	121	P/P	40 - 150
2305178	Carbamazepine	118	131	P/P	40 - 150
2305178	Clothianidin	200	167	F/F	40 - 150
2305178	Dinotefuran	179	157	F/F	40 - 150
2305178	Diuron	64.9	86.3	P/P	40 - 150
2305178	Fenuron	98.3	98.6	P/P	40 - 150
2305178	Fluridone	116	96.0	P/P	40 - 150
2305178	Hydrocodone	135	124	P/P	40 - 150
2305178	Ibuprofen	132	104	P/P	40 - 150
2305178	Imazapyr	121	122	P/P	40 - 150
2305178	Imidacloprid	287	235	F/F	40 - 150
2305178	Linuron	95.2	74.8	P/P	40 - 150
2305178	Mandestrobin	110	100	P/P	40 - 150
2305178	MCPP	174	141	F/P	40 - 150
2305178	Naproxen	101	100	P/P	40 - 150
2305178	Primidone	156	118	F/P	40 - 150
2305178	Pyraclostrobin	111	99.0	P/P	40 - 150
2305178	Thiamethoxam	222	203	F/F	40 - 150
2305178	Tolfenpyrad	101	84.4	P/P	30 - 150
2305178	Triclopyr	159	107	F/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P409687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305124	Acesulfame K	102	94.3	P/P	40 - 150
2305124	AMPA	98.8	97.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P409687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305124	Endothall	76.4	82.9	P/P	40 - 150
2305124	Glufosinate	107	105	P/P	40 - 150
2305124	Glyphosate	93.0	90.3	P/P	40 - 150
2305124	Sucralose	80.0	83.2	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305329	Fluoride	99.5	98.9	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P410394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2305163	Organic Carbon	100		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305266	Color (true)	0.266	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305323	Turbidity	18.7	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304833	Barium	4.82	Spike	P	0 - 20
2304833	Calcium	4.87	Spike	P	0 - 20
2304833	Iron	4.13	Spike	P	0 - 20
2304833	Magnesium	4.40	Spike	P	0 - 20
2304833	Manganese	4.80	Spike	P	0 - 20
2304833	Potassium	3.97	Spike	P	0 - 20
2304833	Sodium	4.61	Spike	P	0 - 20
2304833	Zinc	5.10	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304833	Aluminum	0.613	Spike	P	0 - 20
2304833	Antimony	1.04	Spike	P	0 - 20
2304833	Arsenic	0.462	Spike	P	0 - 20
2304833	Boron	1.02	Spike	P	0 - 20
2304833	Cadmium	2.02	Spike	P	0 - 20
2304833	Chromium	0.394	Spike	P	0 - 20
2304833	Copper	0.663	Spike	P	0 - 20
2304833	Lead	1.68	Spike	P	0 - 20
2304833	Nickel	0.784	Spike	P	0 - 20
2304833	Selenium	0.347	Spike	P	0 - 20
2304833	Silver	0.265	Spike	P	0 - 20
2304833	Thallium	1.82	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305105	Chloride	0.625	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305105	Sulfate	0.00956	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305213	Ammonia-N	1.89	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304615	Kjeldahl Nitrogen	0.842	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305270	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305270	Total-P	1.72	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305216	O-Phosphate-P	1.61	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	Avobenzone	13.0	Spike	P	0 - 30
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

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	Butylate	1.70	Spike	P	0 - 59
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	Octinoxate	6.97	Spike	P	0 - 30
2305257	Oxadiazon	6.93	Spike	P	0 - 27
2305257	Oxybenzone	9.39	Spike	P	0 - 30
2305257	Oxyfluorfen	7.96	Spike	P	0 - 24

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	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
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: P409686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305178	2,4-D	25.6	Spike	P	0 - 30
2305178	2,4,5-T	4.68	Spike	P	0 - 30
2305178	Acetaminophen	0.212	Spike	P	0 - 30
2305178	Acetamiprid	25.8	Spike	P	0 - 30
2305178	Afidopyropen	12.7	Spike	P	0 - 30
2305178	Bentazon	19.5	Spike	P	0 - 30
2305178	Benzovindiflupyr	8.20	Spike	P	0 - 30
2305178	Carbamazepine	10.6	Spike	P	0 - 30
2305178	Clothianidin	18.1	Spike	P	0 - 30
2305178	Dinotefuran	12.8	Spike	P	0 - 30
2305178	Diuron	28.3	Spike	P	0 - 30
2305178	Fenuron	0.363	Spike	P	0 - 30
2305178	Fluridone	18.5	Spike	P	0 - 30
2305178	Hydrocodone	8.13	Spike	P	0 - 30
2305178	Ibuprofen	24.2	Spike	P	0 - 30
2305178	Imazapyr	1.03	Spike	P	0 - 30
2305178	Imidacloprid	20.0	Spike	P	0 - 30
2305178	Linuron	24.0	Spike	P	0 - 30
2305178	Mandestrobin	9.71	Spike	P	0 - 30
2305178	MCP	20.9	Spike	P	0 - 30
2305178	Naproxen	0.895	Spike	P	0 - 30
2305178	Primidone	27.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P409686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305178	Pyraclostrobin	11.6	Spike	P	0 - 30
2305178	Thiamethoxam	8.95	Spike	P	0 - 30
2305178	Tolfenpyrad	17.9	Spike	P	0 - 30
2305178	Triclopyr	38.7	Spike	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P409687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305124	Acesulfame K	7.82	Spike	P	0 - 30
2305124	AMPA	1.46	Spike	P	0 - 30
2305124	Endothall	8.18	Spike	P	0 - 30
2305124	Glufosinate	1.83	Spike	P	0 - 30
2305124	Glyphosate	2.99	Spike	P	0 - 30
2305124	Sucralose	3.66	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P409896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	Total Alkalinity	2.53	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P410160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305249	TDS	0.619	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P409906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305329	Fluoride	0.500	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305163	Organic Carbon	0.322	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2305255
Field Sample ID: G4CE0226

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	117	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	113	P	30 - 160
EPA 8321B	Diuron-d6	69.3	P	30 - 160
EPA 8321B	Endothall-d6	73.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	130	P	30 - 160
EPA 8321B	Primidone-d5	90.0	P	30 - 160
EPA 8321B	Sucralose-d6	78.6	P	30 - 160

Lab Sample ID: 2305257
Field Sample ID: G4CE0226

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	58.9	P	20 - 200
EPA 8270E	Simazine-d10	91.4	P	71 - 140
EPA 8270E	Terbufos-d10	88.1	P	62 - 131
EPA 8270E	Terphenyl-d14	93.7	P	55 - 108

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110364

Included Lab Sample IDs: 2305251

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	99.5	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110369

Included Lab Sample IDs: 2305249

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110371

Included Lab Sample IDs: 2305249

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

Reference Method: EPA 8321B

Run ID: A110380

Included Lab Sample IDs: 2305255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	125	116	P/P	50 - 150
2,4,5-T	133	143	P/P	50 - 150
Acetaminophen	130	100	P/P	60 - 160
Acetamiprid	117	120	P/P	50 - 150
Afidopyropen	121	126	P/P	50 - 150
Bentazon	128	107	P/P	50 - 160
Benzovindiflupyr	137	126	P/P	50 - 150
Carbamazepine	119	128	P/P	60 - 150
Clothianidin	121	108	P/P	60 - 150
Dinotefuran	117	109	P/P	50 - 150
Diuron	125	132	P/P	60 - 160
Fenuron	108	94.9	P/P	60 - 150
Fluridone	115	116	P/P	60 - 160
Hydrocodone	117	100	P/P	60 - 150
Ibuprofen	116	139	P/P	50 - 160
Imazapyr	110	90.9	P/P	50 - 150
Imidacloprid	106	109	P/P	60 - 150
Linuron	93.8	113	P/P	60 - 150
Mandestrobin	109	115	P/P	50 - 150
MCPP	125	131	P/P	50 - 150
Naproxen	134	75.2	P/P	50 - 160
Primidone	90.4	116	P/P	60 - 150
Pyraclostrobin	112	128	P/P	60 - 150
Thiamethoxam	116	113	P/P	50 - 150
Tolfenpyrad	141	153*	P/F	60 - 150
Triclopyr	123	151*	P/F	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A110387
Included Lab Sample IDs: 2305255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.1	97.2	P/P	60 - 160
Glufosinate	103	105	P/P	60 - 160
Glyphosate	98.1	95.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A110393
Included Lab Sample IDs: 2305255

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.7	85.2	P/P	60 - 160
Endothall	60.4	66.8	P/P	60 - 160
Sucralose	71.4	84.9	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A110423
Included Lab Sample IDs: 2305249

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A110425
Included Lab Sample IDs: 2305256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	95.9	96.6	P/P	90 - 110
Arsenic	99.2	99.0	P/P	90 - 110
Boron	105	106	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	97.8	98.2	P/P	90 - 110
Copper	99.6	98.4	P/P	90 - 110
Lead	97.9	98.6	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Selenium	99.5	99.6	P/P	90 - 110
Silver	92.3	92.4	P/P	90 - 110
Thallium	105	104	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A110433
Included Lab Sample IDs: 2305249

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.8	91.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A110433
Included Lab Sample IDs: 2305249

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

Reference Method: SM 4500 F-C-2011

Run ID: A110433

Included Lab Sample IDs: 2305249

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110438

Included Lab Sample IDs: 2305250

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.0	96.2	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A110507

Included Lab Sample IDs: 2305257

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110507
Included Lab Sample IDs: 2305257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Flumioxazin	114		P	80 - 120
Flutolanil	108		P	80 - 120
Fluxapyroxad	90.9		P	80 - 120
Fonofos	98.1		P	80 - 120
Hexazinone	99.8		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
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
Terbutylazine	106		P	80 - 120
Thiobencarb	110		P	80 - 120
Triadimefon	109		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A110521
Included Lab Sample IDs: 2305250

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110534

Included Lab Sample IDs: 2305250

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

Reference Method: EPA 8270E

Run ID: A110535

Included Lab Sample IDs: 2305257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	101		P	80 - 120
Octinoxate	91.5		P	80 - 120
Oxybenzone	95.8		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110559

Included Lab Sample IDs: 2305256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	104	105	P/P	90 - 110
Calcium	105	100	P/P	90 - 110
Iron	105	101	P/P	90 - 110
Magnesium	105	101	P/P	90 - 110
Manganese	105	106	P/P	90 - 110
Potassium	102	98.7	P/P	90 - 110
Sodium	103	99.4	P/P	90 - 110
Zinc	103	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110602

Included Lab Sample IDs: 2305250

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.8	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110639

Included Lab Sample IDs: 2305250

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	92.2	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	98.2				0.266	
EPA 180.1 Rev. 2.0	Turbidity	96.0				18.7	
EPA 200.7 Rev. 4.4	Barium	108	110	104	108		4.82
	Calcium	106	110	109			4.87
	Iron	107	111	107	109		4.13
	Magnesium	106	108	109			4.40
	Manganese	109	112	106	108		4.80
	Potassium	109	109	104	106		3.97
	Sodium	104	107	104			4.61
	Zinc	105	106	100	104		5.10
EPA 200.8 Rev. 5.4	Aluminum	101	102	102	102		0.613
	Antimony	98.9	103	102	99.9		1.04
	Arsenic	102	103	103	99.7		0.462
	Boron	103	110	111	109		1.02
	Cadmium	100	102	104	102		2.02
	Chromium	96.5	100	101	99.0		0.394
	Copper	98.4	98.7	99.3	97.8		0.663
	Lead	99.1	99.7	101	100		1.68
	Nickel	104	102	101	98.4		0.784
	Selenium	101	79.5	79.2	99.7		0.347
	Silver	99.9	102	102	98.6		0.265
	Thallium	103	106	108	105		1.82
EPA 300.0 Rev. 2.1	Chloride	101	99.5	102		0.625	
	Sulfate	99.7	99.9	99.2		0.0095	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	97.0	99.4			1.89
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	92.7	97.5	96.1			0.842
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	100	105	103			1.72
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9	98.7	100			1.61
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
	Avobenzone	95.9	124	142			13.0
	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dithiopyr	87.7	93.0	94.2		1.27
	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
	Octinoxate	65.4	92.7	99.4		6.97
	Oxadiazon	74.3	84.3	78.6		6.93
	Oxybenzone	117	116	128		9.39
	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
	Phenytol	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Terbufos	101	122	120		1.74
	Terbutylazine	97.1	94.5	101		6.92
	Thiobencarb	95.8	88.0	101		13.7
	Triadimefon	90.0	94.8	98.5		3.78
EPA 8321B	2,4-D	148	114	147		25.6
	2,4,5-T	118	126	132		4.68
	Acesulfame K	102	102	94.3		7.82
	Acetaminophen	113	144	145		0.212
	Acetamiprid	118	98.4	128		25.8
	Afidopyropen	124	82.0	93.1		12.7
	AMPA	95.6	98.8	97.3		1.46
	Bentazon	105	59.3	48.8		19.5
	Benzovindiflupyr	147	121	111		8.20
	Carbamazepine	136	131	118		10.6
	Clothianidin	137	167	200		18.1
	Dinotefuran	120	157	179		12.8
	Diuron	112	86.3	64.9		28.3
	Endothall	68.0	76.4	82.9		8.18
	Fenuron	104	98.6	98.3		0.363
	Fluridone	119	96.0	116		18.5
	Glufosinate	108	107	105		1.83
	Glyphosate	101	93.0	90.3		2.99
	Hydrocodone	105	124	135		8.13
	Ibuprofen	130	104	132		24.2
	Imazapyr	121	122	121		1.03
	Imidacloprid	118	235	287		20.0
	Linuron	103	74.8	95.2		24.0
	Mandestrobin	105	100	110		9.71
	MCPP	146	141	174		20.9
	Naproxen	79.2	100	101		0.895
	Primidone	135	118	156		27.8
	Pyraclostrobin	97.0	99.0	111		11.6
	Sucralose	93.5	80.0	83.2		3.66
	Thiamethoxam	125	203	222		8.95
	Tolfenpyrad	88.3	84.4	101		17.9
	Triclopyr	113	107	159		38.7
SM 2320 B-2011	Total Alkalinity	97.0			2.53	
SM 2540 C-2011	TDS				0.619	
SM 4500 F-C-2011	Fluoride	98.9	99.5	98.9		0.500
SM 5310 B-2011	Organic Carbon	93.3	100			0.322

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2305249
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2305249
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2305256
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2305256
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2305249
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2305249
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2305250

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2305250
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2305250
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2305250
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2305251
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2305257
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2305257
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2305255
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2305249
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2305256
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2305249
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2305249
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2305249
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2305250

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	02/11/2022			02/11/2022 16:03	Anna M. Plaviak	2305249
EPA 180.1 Rev. 2.0	02/11/2022			02/11/2022 14:44	Khloe J Berg	2305249
EPA 200.7 Rev. 4.4	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/22/2022 15:54	Josef B Mick	2305256
EPA 200.8 Rev. 5.4	02/11/2022	02/14/2022 10:40	Megan Whitefoot	02/15/2022 17:26	Alexander Thompson	2305256
EPA 300.0 Rev. 2.1	02/11/2022			02/17/2022 16:09	Roberta Tatti	2305249
EPA 350.1 Rev. 2.0	02/11/2022			02/24/2022 15:13	Ping Hua	2305250
EPA 351.2 Rev. 2.0	02/11/2022	02/14/2022 16:13	Samantha L Bates	02/16/2022 11:12	Alexandra J Mattheus	2305250
EPA 353.2 Rev. 2.0	02/11/2022			02/22/2022 10:32	Beverly Y. Sanders	2305250
EPA 365.1 Rev. 2.0	02/11/2022	02/16/2022 14:20	Simonne.V. Calhoun	02/21/2022 14:57	Sarah A Nixon	2305250
EPA 365.1 Rev. 2.0 dissolved	02/11/2022			02/11/2022 14:36	James L Waggeberby	2305251
EPA 8270E	02/11/2022	02/14/2022 08:00	Fe-Val Siddell	02/16/2022 15:01	Michael Poppell	2305257
	02/11/2022	02/14/2022 08:00	Fe-Val Siddell	02/18/2022 21:49	Lipi Saha	2305257
EPA 8321B	02/11/2022	02/11/2022 13:00	Hoor Shaik	02/12/2022 13:24	Juyoung Kim	2305255
	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 17:18	Umesh Chiluwal	2305255
	02/11/2022	02/11/2022 14:00	Umesh Chiluwal	02/11/2022 22:43	Umesh Chiluwal	2305255
SM 2320 B-2011	02/11/2022			02/15/2022 22:59	Dale L. Simmons	2305249
SM 2340B	02/11/2022			02/22/2022 15:54	Josef B Mick	2305256
SM 2540 C-2011	02/11/2022			02/16/2022 15:36	Yijie Li	2305249
SM 2540 D-2011	02/11/2022			02/16/2022 15:36	Yijie Li	2305249
SM 4500 F-C-2011	02/11/2022			02/15/2022 22:59	Dale L. Simmons	2305249
SM 5310 B-2011	02/11/2022			02/27/2022 14:02	Touraj Touran	2305250