

Chemical Analysis Report

CEN-DIST-2022-05-25-02

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

Event Description: **Lake Helen and Big Lake LVIs**

Request ID: **RQ-2022-05-23-21**

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
Attn: Matthew Bearden

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: Colin Wright, Program Administrator

Date Certified: 20-JUN-2022 09:12



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Lake Helen @ center of southern lobe

Collection Date/Time: 05/24/2022 14:17

Field ID: G2CE0212

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329959	DEP SOP: NU-094-1	Color (true)**	15		PCU	P414374	
	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P414378	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P414633	
		Sulfate	11		mg SO4/L	P414636	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P414539	
	SM 2540 C-2011	TDS	67		mg/L	P414670	
	SM 2540 D-2011	TSS	2	I	mg/L	P414674	
	SM 4500-F- C-2011	Fluoride	0.035	UJ	mg F/L	P415142	LCS
2329961	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P415217	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P414951	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414642	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P414411	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P414517	
2329963	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P414425	
2329967	EPA 8321B	2,4-D	0.0020	U	ug/L	P414365	
		Acesulfame K	0.19	I	ug/L	P414387	
		2,4,5-T	0.0040	U	ug/L	P414365	
		AMPA	0.10	U	ug/L	P414387	
		Acetaminophen	0.0080	U	ug/L	P414365	
		Acetamiprid	0.0020	U	ug/L	P414365	
		Endothall	0.25	U	ug/L	P414387	
		Glufosinate	0.10	U	ug/L	P414387	
		Glyphosate	0.10	U	ug/L	P414387	
		Afidopyropen	0.0020	U	ug/L	P414365	
		Bentazon	0.0021	I	ug/L	P414365	
		Sucralose	1.1		ug/L	P414387	
		Benzovindiflupyr	0.0020	U	ug/L	P414365	
		Carbamazepine	8.0E-04	U	ug/L	P414365	
		Clothianidin	0.0020	U	ug/L	P414365	
		Dinotefuran	0.0020	U	ug/L	P414365	
		Diuron	0.0020	I	ug/L	P414365	
		Fenuron	0.032	U	ug/L	P414365	
		Fluridone	8.0E-04	U	ug/L	P414365	
		Imazapyr	0.0040	U	ug/L	P414365	
		Hydrocodone	0.0020	U	ug/L	P414365	
		Ibuprofen	0.020	U	ug/L	P414365	
		Imidacloprid	0.0020	U	ug/L	P414365	
		Linuron	0.0040	U	ug/L	P414365	
		Mandestrobin	0.0020	U	ug/L	P414365	
		MCPP	0.0040	U	ug/L	P414365	
		Naproxen	0.0080	U	ug/L	P414365	
		Primidone	0.0040	U	ug/L	P414365	
		Pyraclostrobin	0.0020	U	ug/L	P414365	

Field ID: G2CE0212

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329967	EPA 8321B	Silvex	0.0040	U	ug/L	P414365	
		Thiamethoxam	0.0020	U	ug/L	P414365	
		Tolfenpyrad	0.0020	U	ug/L	P414365	
		Triclopyr	0.0040	U	ug/L	P414365	
2329969	EPA 200.7 Rev. 4.4	Calcium	10.7		mg/L	P414396	
		Iron	30	U	ug/L	P414396	
		Magnesium	2.00		mg/L	P414396	
		Potassium	2.7		mg/L	P414396	
		Sodium	11.6		mg/L	P414396	
		Strontium	39.6		ug/L	P414396	
		Tin	3.0	U	ug/L	P414396	
		Titanium	0.75	U	ug/L	P414396	
		Vanadium	2.2	I	ug/L	P414396	
		Zinc	5.0	U	ug/L	P414396	
	EPA 200.8 Rev. 5.4	Aluminum	29		ug/L	P414396	
		Antimony	0.17	I	ug/L	P414396	
		Arsenic	1.70		ug/L	P414396	
		Barium	14.3		ug/L	P414396	
		Beryllium	0.010	U	ug/L	P414396	
		Boron**	57.0		ug/L	P414396	
		Cadmium	0.020	U	ug/L	P414396	
		Chromium	0.40	U	ug/L	P414396	
		Cobalt	0.020	U	ug/L	P414396	
		Copper	0.40	U	ug/L	P414396	
		Lead	0.20	U	ug/L	P414396	
		Manganese	4.50		ug/L	P414396	
		Molybdenum	0.27	I	ug/L	P414396	
		Nickel	0.50	U	ug/L	P414396	
		Selenium	0.20	U	ug/L	P414396	
		Silver	0.010	U	ug/L	P414396	
		Thallium	0.10	U	ug/L	P414396	
	SM 2340 B-2011	Hardness	34.9		mg/L	P414396	
2329971	EPA 8270E	Oxybenzone**	9.7	U	ng/L	P414288	MS, RPD
		Acetochlor	0.24	U	ng/L	P414288	
		Octinoxate**	19	U	ng/L	P414288	
		Alachlor	0.24	U	ng/L	P414288	
		Avobenzone**	97	U	ng/L	P414288	
		Ametryn	0.58	U	ng/L	P414288	
		Atrazine	2.1		ng/L	P414288	
		Atrazine Desethyl	1.4	U	ng/L	P414288	
		Azinphos Methyl	1.9	U	ng/L	P414288	
		Azoxystrobin**	0.48	U	ng/L	P414288	
		Bromacil	0.48	U	ng/L	P414288	
		Butylate	0.39	U	ng/L	P414288	
		Caffeine**	7.2	U	ng/L	P414288	

Field ID: G2CE0212

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329971	EPA 8270E	Carbophenothion	2.4	U	ng/L	P414288	
		Carfentrazone Ethyl**	0.097	U	ng/L	P414288	
		Chlorfenapyr**	0.17	U	ng/L	P414288	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P414288	
		Chlorpyrifos Methyl	0.048	U	ng/L	P414288	
		Coumaphos**	0.48	U	ng/L	P414288	
		Cyanazine	3.1	U	ng/L	P414288	
		Cyprodinil**	0.097	U	ng/L	P414288	
		Demeton	1.4	U	ng/L	P414288	
		Diazinon	0.12	U	ng/L	P414288	
		Difenoconazole**	0.58	U	ng/L	P414288	
		Dimethenamid**	0.097	UJ	ng/L	P414288	LCS
		Dimethomorph**	0.17	U	ng/L	P414288	MS, RPD
		Disulfoton	0.48	U	ng/L	P414288	
		Dithiopyr**	0.17	U	ng/L	P414288	
		EPTC	1.2	U	ng/L	P414288	
		Ethion	0.14	U	ng/L	P414288	
		Ethoprop	0.097	U	ng/L	P414288	
		Etridiazole**	0.14	U	ng/L	P414288	
		Fenamiphos	0.48	U	ng/L	P414288	
		Fenbuconazole**	0.12	U	ng/L	P414288	
		Fipronil	0.24	U	ng/L	P414288	
		Fipronil Desulfinyl**	0.26	I	ng/L	P414288	
		Fipronil Sulfide	0.14	U	ng/L	P414288	
		Fipronil Sulfone	0.34	I	ng/L	P414288	
		Fluazifop-P-butyl**	0.097	U	ng/L	P414288	
		Fludioxonil**	0.12	U	ng/L	P414288	
		Flumioxazin**	1.7	U	ng/L	P414288	
		Flutolanil**	0.097	U	ng/L	P414288	
		Fluxapyroxad**	0.097	U	ng/L	P414288	
		Fonofos	0.19	U	ng/L	P414288	
		Hexazinone	0.48	U	ng/L	P414288	
		Imazalil**	0.72	U	ng/L	P414288	
		Iprodione**	0.58	U	ng/L	P414288	
		Loratadine**	0.097	U	ng/L	P414288	
		Malathion	0.34	U	ng/L	P414288	
		Metalaxyl	0.72	U	ng/L	P414288	
		Metolachlor	0.34	U	ng/L	P414288	
		Metribuzin	2.4	U	ng/L	P414288	
		Mevinphos	1.0	U	ng/L	P414288	
		Molinate	0.29	U	ng/L	P414288	
		Myclobutanil**	0.24	U	ng/L	P414288	
		Naled**	1.4	U	ng/L	P414288	
		Napropamide**	0.39	UJ	ng/L	P414288	LCS
		Norflurazon	0.48	U	ng/L	P414288	

Field ID: G2CE0212

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329971	EPA 8270E	Oxadiazon	0.29	U	ng/L	P414288	
		Oxyfluorfen**	0.14	U	ng/L	P414288	
		Parathion Ethyl	0.24	U	ng/L	P414288	
		Parathion Methyl	0.53	U	ng/L	P414288	
		Pendimethalin	0.97	U	ng/L	P414288	
		Phenytol**	3.4	U	ng/L	P414288	
		Phorate	0.51	U	ng/L	P414288	
		Prodiamine**	0.29	U	ng/L	P414288	
		Prometon	0.87	U	ng/L	P414288	
		Prometryn	0.19	U	ng/L	P414288	
		Pronamide**	0.14	U	ng/L	P414288	
		Propanil**	0.12	U	ng/L	P414288	
		Propargite**	1.4	U	ng/L	P414288	
		Propiconazole**	0.48	U	ng/L	P414288	
		Pyraflufen Ethyl**	0.24	U	ng/L	P414288	
		Pyridaben**	0.43	U	ng/L	P414288	
		Pyriproxyfen**	0.12	U	ng/L	P414288	
		Simazine	2.2		ng/L	P414288	
		Stirophos**	0.12	U	ng/L	P414288	
		Sulfentrazone**	0.48	U	ng/L	P414288	
		Tebuconazole**	1.8	I	ng/L	P414288	
		Terbufos	0.097	U	ng/L	P414288	
		Terbutylazine	0.41	U	ng/L	P414288	
		Thiobencarb**	0.58	U	ng/L	P414288	
		Triadimefon**	0.24	U	ng/L	P414288	

Ref. Method and Comment:

SM 4500-F- C-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Sample Location: Big Lake @ center of lake

Collection Date/Time: 05/24/2022 12:34

Field ID: G2CE0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329960	DEP SOP: NU-094-1	Color (true)**	59		PCU	P414374	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P414378	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P414633	
		Sulfate	4.1		mg SO4/L	P414636	
	SM 2320 B-2011	Total Alkalinity	35		mg CaCO3/L	P414539	
	SM 2540 C-2011	TDS	132		mg/L	P414670	
	SM 2540 D-2011	TSS	2	I	mg/L	P414674	
	SM 4500-F- C-2011	Fluoride	0.12	J	mg F/L	P415142	LCS
2329962	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P415077	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P414564	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414642	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P414411	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P414517	
2329964	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P414425	
2329968	EPA 8321B	2,4-D	0.0083		ug/L	P414365	
		Acesulfame K	0.10	U	ug/L	P414387	
		2,4,5-T	0.0040	U	ug/L	P414365	
		AMPA	0.10	U	ug/L	P414387	
		Acetaminophen	0.0080	U	ug/L	P414365	
		Acetamiprid	0.0020	U	ug/L	P414365	
		Endothall	0.25	U	ug/L	P414387	
		Glufosinate	0.10	U	ug/L	P414387	
		Glyphosate	0.10	U	ug/L	P414387	
		Afidopyropen	0.0020	U	ug/L	P414365	
		Bentazon	0.041		ug/L	P414365	
		Sucralose	2.0		ug/L	P414387	
		Benzovindiflupyr	0.0020	U	ug/L	P414365	
		Carbamazepine	0.0032	I	ug/L	P414365	
		Clothianidin	0.0020	U	ug/L	P414365	
		Dinotefuran	0.0020	U	ug/L	P414365	
		Diuron	0.0020	U	ug/L	P414365	
		Fenuron	0.032	U	ug/L	P414365	
		Fluridone	0.0030	I	ug/L	P414365	
		Imazapyr	0.082		ug/L	P414365	
		Hydrocodone	0.0020	U	ug/L	P414365	
		Ibuprofen	0.020	U	ug/L	P414365	
		Imidacloprid	0.0020	U	ug/L	P414365	
		Linuron	0.0040	U	ug/L	P414365	
		Mandestrobin	0.0020	U	ug/L	P414365	
		MCP	0.0040	U	ug/L	P414365	
		Naproxen	0.0080	U	ug/L	P414365	
		Primidone	0.0063	I	ug/L	P414365	
		Pyraclostrobin	0.0020	U	ug/L	P414365	

Field ID: G2CE0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329968	EPA 8321B	Silvex	0.0040	U	ug/L	P414365	
		Thiamethoxam	0.0020	U	ug/L	P414365	
		Tolfenpyrad	0.0020	U	ug/L	P414365	
		Triclopyr	0.0040	U	ug/L	P414365	
2329970	EPA 200.7 Rev. 4.4	Calcium	18.3		mg/L	P414396	
		Iron	34	I	ug/L	P414396	
		Magnesium	2.45		mg/L	P414396	
		Potassium	2.2		mg/L	P414396	
		Sodium	25.3		mg/L	P414396	
		Strontium	106		ug/L	P414396	
		Tin	3.0	U	ug/L	P414396	
		Titanium	0.75	U	ug/L	P414396	
		Vanadium	2.0	U	ug/L	P414396	
		Zinc	5.0	U	ug/L	P414396	
	EPA 200.8 Rev. 5.4	Aluminum	14	I	ug/L	P414396	
		Antimony	0.050	U	ug/L	P414396	
		Arsenic	0.65		ug/L	P414396	
		Barium	9.62		ug/L	P414396	
		Beryllium	0.010	U	ug/L	P414396	
		Boron**	45.2		ug/L	P414396	
		Cadmium	0.020	U	ug/L	P414396	
		Chromium	0.40	U	ug/L	P414396	
		Cobalt	0.020	U	ug/L	P414396	
		Copper	0.63	I	ug/L	P414396	
		Lead	0.20	U	ug/L	P414396	
		Manganese	2.12		ug/L	P414396	
		Molybdenum	0.15	U	ug/L	P414396	
		Nickel	0.50	U	ug/L	P414396	
		Selenium	0.20	U	ug/L	P414396	
		Silver	0.010	U	ug/L	P414396	
		Thallium	0.10	U	ug/L	P414396	
		Hardness	55.8		mg/L	P414396	
2329972	SM 2340 B-2011	Oxybenzone**	9.6	U	ng/L	P414288	MS, RPD
	EPA 8270E	Acetochlor	0.24	U	ng/L	P414288	
		Octinoxate**	19	U	ng/L	P414288	
		Alachlor	0.24	U	ng/L	P414288	
		Avobenzone**	96	U	ng/L	P414288	
		Ametryn	0.58	U	ng/L	P414288	
		Atrazine	7.9		ng/L	P414288	
		Atrazine Desethyl	1.7	I	ng/L	P414288	
		Azinphos Methyl	1.9	U	ng/L	P414288	
		Azoxystrobin**	0.48	U	ng/L	P414288	
		Bromacil	0.48	U	ng/L	P414288	
		Butylate	0.38	U	ng/L	P414288	
		Caffeine**	7.2	U	ng/L	P414288	

Field ID: G2CE0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329972	EPA 8270E	Carbophenothion	2.4	U	ng/L	P414288	
		Carfentrazone Ethyl**	0.096	U	ng/L	P414288	
		Chlorfenapyr**	0.17	U	ng/L	P414288	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P414288	
		Chlorpyrifos Methyl	0.048	U	ng/L	P414288	
		Coumaphos**	0.48	U	ng/L	P414288	
		Cyanazine	3.1	U	ng/L	P414288	
		Cyprodinil**	0.096	U	ng/L	P414288	
		Demeton	1.4	U	ng/L	P414288	
		Diazinon	0.12	U	ng/L	P414288	
		Difenoconazole**	0.58	U	ng/L	P414288	
		Dimethenamid**	0.096	UJ	ng/L	P414288	LCS
		Dimethomorph**	0.17	U	ng/L	P414288	MS, RPD
		Disulfoton	0.48	U	ng/L	P414288	
		Dithiopyr**	0.17	U	ng/L	P414288	
		EPTC	1.2	U	ng/L	P414288	
		Ethion	0.14	U	ng/L	P414288	
		Ethoprop	0.096	U	ng/L	P414288	
		Etridiazole**	0.14	U	ng/L	P414288	
		Fenamiphos	0.48	U	ng/L	P414288	
		Fenbuconazole**	0.12	U	ng/L	P414288	
		Fipronil	0.24	U	ng/L	P414288	
		Fipronil Desulfinyl**	0.19	I	ng/L	P414288	
		Fipronil Sulfide	0.14	U	ng/L	P414288	
		Fipronil Sulfone	0.19	I	ng/L	P414288	
		Fluazifop-P-butyl**	0.096	U	ng/L	P414288	
		Fludioxonil**	0.12	U	ng/L	P414288	
		Flumioxazin**	1.7	U	ng/L	P414288	
		Flutolanil**	0.096	U	ng/L	P414288	
		Fluxapyroxad**	0.096	U	ng/L	P414288	
		Fonofos	0.19	U	ng/L	P414288	
		Hexazinone	0.48	U	ng/L	P414288	
		Imazalil**	0.72	U	ng/L	P414288	
		Iprodione**	0.58	U	ng/L	P414288	
		Loratadine**	0.096	U	ng/L	P414288	
		Malathion	0.34	U	ng/L	P414288	
		Metalaxyl	0.72	U	ng/L	P414288	
		Metolachlor	0.34	U	ng/L	P414288	
		Metribuzin	2.4	U	ng/L	P414288	
		Mevinphos	1.0	U	ng/L	P414288	
		Molinate	0.29	U	ng/L	P414288	
		Myclobutanil**	0.24	U	ng/L	P414288	
		Naled**	1.4	U	ng/L	P414288	
		Napropamide**	0.38	UJ	ng/L	P414288	LCS
		Norflurazon	0.48	U	ng/L	P414288	

Field ID: G2CE0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2329972	EPA 8270E	Oxadiazon	0.29	U	ng/L	P414288	
		Oxyfluorfen**	0.14	U	ng/L	P414288	
		Parathion Ethyl	0.24	U	ng/L	P414288	
		Parathion Methyl	0.53	U	ng/L	P414288	
		Pendimethalin	0.96	U	ng/L	P414288	
		Phenytol**	3.4	U	ng/L	P414288	
		Phorate	0.50	U	ng/L	P414288	
		Prodiamine**	0.29	U	ng/L	P414288	
		Prometon	0.86	U	ng/L	P414288	
		Prometryn	0.19	U	ng/L	P414288	
		Pronamide**	0.14	U	ng/L	P414288	
		Propanil**	0.12	U	ng/L	P414288	
		Propargite**	1.4	U	ng/L	P414288	
		Propiconazole**	0.48	U	ng/L	P414288	
		Pyraflufen Ethyl**	0.24	U	ng/L	P414288	
		Pyridaben**	0.43	U	ng/L	P414288	
		Pyriproxyfen**	0.12	U	ng/L	P414288	
		Simazine	0.48	U	ng/L	P414288	
		Stirophos**	0.12	U	ng/L	P414288	
		Sulfentrazone**	0.48	U	ng/L	P414288	
		Tebuconazole**	0.48	U	ng/L	P414288	
		Terbufos	0.096	U	ng/L	P414288	
		Terbutylazine	0.41	U	ng/L	P414288	
		Thiobencarb**	0.58	U	ng/L	P414288	
		Triadimefon**	0.24	U	ng/L	P414288	

Ref. Method and Comment:

SM 4500-F- C-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P414374

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414378

Component	Result	Code	Units
Turbidity	0.10	U	NTU

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

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

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

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414633

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: P414636

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415077

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415217

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414564

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414951

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414642

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414411

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414425

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

Reference Method: EPA 8270E
Batch ID: P414288

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

Component	Result	Code	Units
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

Component	Result	Code	Units
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
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.30	U	ng/L
Prodiamine	0.30	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414288

Component	Result	Code	Units
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B

Batch ID: P414365

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P414387

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P414539

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P414670

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P414674

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415142

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414517

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: P414374

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414378

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

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

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

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

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414633

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414636

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415077

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415217

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414642

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414411

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P414425

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

Reference Method: EPA 8270E
Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	80.9		P	70 - 121
Alachlor	81.7		P	68 - 119
Ametryn	93.2		P	64 - 139
Atrazine	80.7		P	76 - 120

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine Desethyl	70.2		P	44 - 126
Avobenzone	97.6		P	76 - 212
Azinphos Methyl	102		P	43 - 192
Azoxystrobin	120		P	36 - 224
Bromacil	65.8		P	52 - 121
Butylate	52.0		P	28 - 91.0
Caffeine	72.0		P	50 - 134
Carbophenothion	74.6		P	56 - 129
Carfentrazone Ethyl	92.2		P	60 - 141
Chlorfenapyr	71.5		P	56 - 115
Chlorpyrifos Ethyl	78.8		P	60 - 118
Chlorpyrifos Methyl	83.3		P	68 - 119
Coumaphos	58.7		P	18 - 250
Cyanazine	73.6		P	61 - 250
Cyprodinil	95.7		P	55 - 145
Demeton	68.5		P	30 - 159
Diazinon	97.6		P	70 - 123
Difenoconazole	168		P	49 - 204
Dimethenamid	59.1		F	64 - 115
Dimethomorph	126		P	12 - 219
Disulfoton	93.4		P	44 - 125
Dithiopyr	75.8		P	64 - 115
EPTC	53.4		P	28 - 86.0
Ethion	57.3		P	33 - 125
Ethoprop	98.2		P	64 - 116
Etridiazole	60.6		P	34 - 91.0
Fenamiphos	62.4		P	12 - 127
Fenbuconazole	76.1		P	59 - 151
Fipronil	82.2		P	67 - 129
Fipronil Desulfinyl	81.5		P	65 - 127
Fipronil Sulfide	76.9		P	61 - 116
Fipronil Sulfone	75.3		P	55 - 117
Fluazifop-P-butyl	89.4		P	62 - 127
Fludioxonil	63.1		P	62 - 128
Flumioxazin	51.0		P	33 - 250
Flutolanil	63.8		P	56 - 127
Fluxapyroxad	119		P	45 - 128
Fonofos	89.8		P	62 - 111
Hexazinone	69.1		P	46 - 139
Imazalil	63.2		P	38 - 142
Iprodione	73.5		P	47 - 135
Loratadine	143		P	10 - 244
Malathion	80.0		P	61 - 139
Metalaxyl	76.4		P	10 - 119
Metolachlor	74.5		P	65 - 118
Metribuzin	106		P	51 - 250
Mevinphos	85.5		P	53 - 121
Molinate	64.8		P	42 - 96.0
Myclobutanil	58.2		P	55 - 128
Naled	82.8		P	10 - 98.0
Napropamide	41.9		F	49 - 121
Norflurazon	64.3		P	61 - 126

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Octinoxate	61.6		P	30 - 159
Oxadiazon	70.1		P	59 - 116
Oxybenzone	69.5		P	61 - 139
Oxyfluorfen	73.5		P	64 - 137
Parathion Ethyl	90.9		P	70 - 112
Parathion Methyl	116		P	76 - 133
Pendimethalin	85.8		P	52 - 117
Phenytol	20.3		P	10 - 199
Phorate	82.0		P	48 - 121
Prodiamine	49.6		P	26 - 142
Prometon	69.1		P	43 - 123
Prometryn	88.5		P	66 - 127
Pronamide	89.1		P	75 - 121
Propanil	84.6		P	45 - 150
Propargite	100		P	42 - 208
Propiconazole	76.0		P	60 - 125
Pyraflufen Ethyl	112		P	70 - 138
Pyridaben	69.2		P	35 - 245
Pyriproxyfen	38.4		P	30 - 149
Simazine	81.5		P	72 - 125
Stirophos	64.3		P	29 - 164
Sulfentrazone	52.8		P	21 - 139
Tebuconazole	20.7		P	10 - 115
Terbufos	115		P	60 - 123
Terbuthylazine	83.3		P	72 - 115
Thiobencarb	72.7		P	31 - 139
Triadimefon	66.5		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P414365

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	91.6		P	40 - 150
2,4,5-T	80.7		P	40 - 150
Acetaminophen	66.4		P	30 - 150
Acetamiprid	90.5		P	40 - 150
Afidopyropen	68.7		P	30 - 150
Bentazon	117		P	30 - 150
Benzovindiflupyr	86.7		P	40 - 150
Carbamazepine	105		P	40 - 150
Clothianidin	100		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	87.8		P	40 - 150
Fenuron	99.1		P	40 - 150
Fluridone	82.0		P	40 - 150
Hydrocodone	91.2		P	40 - 150
Ibuprofen	70.2		P	40 - 150
Imazapyr	101		P	40 - 150
Imidacloprid	94.6		P	40 - 150
Linuron	71.9		P	40 - 150
Mandestrobin	84.6		P	40 - 150
MCP	126		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P414365

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naproxen	81.6		P	40 - 150
Primidone	97.3		P	40 - 150
Pyraclostrobin	94.8		P	40 - 150
Silvex	74.0		P	40 - 150
Thiamethoxam	97.6		P	40 - 150
Tolfenpyrad	50.9		P	30 - 150
Triclopyr	87.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414387

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	139		P	40 - 150
AMPA	102		P	40 - 150
Endothall	96.3		P	40 - 150
Glufosinate	96.6		P	40 - 150
Glyphosate	94.5		P	40 - 150
Sucralose	101		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P414539

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.5		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P415142

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.8		F	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P414517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P414396

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

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P414396

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

Quality Assurance Report Matrix Spike Accuracy

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

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329976	Chloride	97.2		P	90 - 110
2330088	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329976	Sulfate	97.2		P	90 - 110
2330088	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330097	Ammonia-N	97.6	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329253	Ammonia-N	98.2	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329699	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329697	Kjeldahl Nitrogen	98.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329936	NO2NO3-N	94.4	94.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329939	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P414425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329783	O-Phosphate-P	99.0	99.5	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P414288

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

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P414288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328713	Fonofos	86.0	79.4	P/P	58 - 119
2328713	Hexazinone	82.7	78.5	P/P	68 - 172
2328713	Imazalil	94.1	91.6	P/P	48 - 283
2328713	Iprodione	81.7	68.4	P/P	38 - 140
2328713	Loratadine	87.2	95.1	P/P	50 - 150
2328713	Malathion	79.9	78.7	P/P	40 - 137
2328713	Metalaxyl	80.2	66.8	P/P	21 - 129
2328713	Metolachlor	72.2	64.6	P/P	55 - 122
2328713	Metribuzin	98.5	93.8	P/P	38 - 187
2328713	Mevinphos	105	91.8	P/P	54 - 134
2328713	Molinate	64.7	62.0	P/P	41 - 97.0
2328713	Myclobutanil	86.2	75.9	P/P	56 - 125
2328713	Naled	87.8	81.3	P/P	10 - 108
2328713	Napropamide	64.8	56.8	P/P	50 - 150
2328713	Norflurazon	76.3	65.1	P/P	32 - 122
2328713	Octinoxate	42.3	52.7	P/P	25 - 150
2328713	Oxadiazon	71.4	65.1	P/P	40 - 119
2328713	Oxybenzone	53.6	157	F/F	59 - 147
2328713	Oxyfluorfen	101	88.6	P/P	61 - 153
2328713	Parathion Ethyl	87.1	76.3	P/P	59 - 130
2328713	Parathion Methyl	124	112	P/P	65 - 155
2328713	Pendimethalin	101	95.6	P/P	49 - 138
2328713	Phenytoin	57.5	56.5	P/P	50 - 200
2328713	Phorate	110	84.8	P/P	54 - 161
2328713	Prodiamine	37.9	33.1	P/P	33 - 161
2328713	Prometon	69.6	77.9	P/P	48 - 140
2328713	Prometryn	87.1	74.5	P/P	55 - 134
2328713	Pronamide	93.4	80.3	P/P	66 - 137
2328713	Propanil	114	101	P/P	50 - 150
2328713	Propargite	128	126	P/P	50 - 200
2328713	Propiconazole	76.7	62.9	P/P	36 - 150
2328713	Pyraflufen Ethyl	74.0	68.4	P/P	50 - 150
2328713	Pyridaben	109	103	P/P	50 - 200
2328713	Pyriproxyfen	79.3	69.0	P/P	10 - 165
2328713	Simazine	94.8	80.1	P/P	57 - 145
2328713	Stirophos	73.3	63.4	P/P	50 - 150
2328713	Sulfentrazone	79.8	65.9	P/P	34 - 140
2328713	Tebuconazole	40.5	37.6	P/P	10 - 127
2328713	Terbufos	109	102	P/P	59 - 138
2328713	Terbuthylazine	90.1	75.1	P/P	68 - 119
2328713	Thiobencarb	64.7	64.4	P/P	50 - 150
2328713	Triadimefon	70.1	59.9	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P414365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329830	2,4-D	96.3	109	P/P	40 - 150
2329830	2,4,5-T	87.3	93.5	P/P	40 - 150
2329830	Acetaminophen	97.5	98.2	P/P	30 - 150
2329830	Acetamiprid	91.6	103	P/P	40 - 150
2329830	Afidopyropen	77.2	85.1	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P414365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329830	Bentazon	107	102	P/P	30 - 150
2329830	Benzovindiflupyr	87.1	91.3	P/P	40 - 150
2329830	Carbamazepine	102	106	P/P	40 - 150
2329830	Clothianidin	99.6	103	P/P	40 - 150
2329830	Dinotefuran	119	122	P/P	40 - 150
2329830	Diuron	86.9	89.9	P/P	40 - 150
2329830	Fenuron	91.1	94.7	P/P	40 - 150
2329830	Fluridone	81.4	80.5	P/P	40 - 150
2329830	Hydrocodone	92.3	97.3	P/P	40 - 150
2329830	Ibuprofen	74.3	77.8	P/P	40 - 150
2329830	Imazapyr	111	104	P/P	40 - 150
2329830	Imidacloprid	105	104	P/P	40 - 150
2329830	Linuron	71.5	69.7	P/P	40 - 150
2329830	Mandestrobin	84.1	84.2	P/P	40 - 150
2329830	MCPP	123	133	P/P	40 - 150
2329830	Naproxen	71.7	78.9	P/P	40 - 150
2329830	Primidone	102	101	P/P	40 - 150
2329830	Pyraclostrobin	92.6	92.5	P/P	40 - 150
2329830	Silvex	77.9	84.8	P/P	40 - 150
2329830	Thiamethoxam	102	107	P/P	40 - 150
2329830	Tolfenpyrad	41.4	43.4	P/P	30 - 150
2329830	Triclopyr	90.2	95.2	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P414387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329967	Acesulfame K	123	122	P/P	40 - 150
2329967	AMPA	98.5	93.8	P/P	40 - 150
2329967	Endothall	95.2	94.1	P/P	40 - 150
2329967	Glufosinate	91.9	94.2	P/P	40 - 150
2329967	Glyphosate	92.0	86.4	P/P	40 - 150
2329967	Sucralose	95.9	98.1	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P415142

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330089	Fluoride	96.3	97.4	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329782	Organic Carbon	94.0	94.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P414374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329977	Color (true)	2.12	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329884	Turbidity	1.83	Sample	P	0 - 20

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

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

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

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

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329976	Chloride	0.551	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329976	Sulfate	0.754	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330097	Ammonia-N	0.955	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329253	Ammonia-N	0.916	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329699	Kjeldahl Nitrogen	0.406	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329697	Kjeldahl Nitrogen	2.87	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329936	NO2NO3-N	0.409	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329939	Total-P	1.42	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P414425

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329783	O-Phosphate-P	0.504	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P414288

Replicated

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

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P414288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328713	Iprodione	17.7	Spike	P	0 - 33
2328713	Loratadine	8.69	Spike	P	0 - 30
2328713	Malathion	0.613	Spike	P	0 - 44
2328713	Metalaxyl	18.2	Spike	P	0 - 38
2328713	Metolachlor	11.1	Spike	P	0 - 36
2328713	Metribuzin	4.85	Spike	P	0 - 63
2328713	Mevinphos	13.5	Spike	P	0 - 26
2328713	Molinate	4.21	Spike	P	0 - 40
2328713	Myclobutanil	12.8	Spike	P	0 - 21
2328713	Naled	7.64	Spike	P	0 - 26
2328713	Napropamide	13.2	Spike	P	0 - 30
2328713	Norflurazon	15.8	Spike	P	0 - 24
2328713	Octinoxate	21.8	Spike	P	0 - 30
2328713	Oxadiazon	9.29	Spike	P	0 - 27
2328713	Oxybenzone	98.2	Spike	F	0 - 30
2328713	Oxyfluorfen	13.3	Spike	P	0 - 24
2328713	Parathion Ethyl	13.2	Spike	P	0 - 28
2328713	Parathion Methyl	10.1	Spike	P	0 - 27
2328713	Pendimethalin	5.33	Spike	P	0 - 31
2328713	Phenytol	1.89	Spike	P	0 - 30
2328713	Phorate	25.5	Spike	P	0 - 27
2328713	Prodiamine	13.6	Spike	P	0 - 52
2328713	Prometon	11.3	Spike	P	0 - 31
2328713	Prometryn	15.6	Spike	P	0 - 28
2328713	Pronamide	15.0	Spike	P	0 - 26
2328713	Propanil	12.1	Spike	P	0 - 30
2328713	Propargite	1.08	Spike	P	0 - 30
2328713	Propiconazole	14.2	Spike	P	0 - 31
2328713	Pyraflufen Ethyl	7.81	Spike	P	0 - 30
2328713	Pyridaben	5.60	Spike	P	0 - 30
2328713	Pyriproxyfen	13.8	Spike	P	0 - 50
2328713	Simazine	16.9	Spike	P	0 - 29
2328713	Stirophos	14.4	Spike	P	0 - 30
2328713	Sulfentrazone	19.0	Spike	P	0 - 33
2328713	Tebuconazole	5.56	Spike	P	0 - 44
2328713	Terbufos	6.39	Spike	P	0 - 29
2328713	Terbuthylazine	18.1	Spike	P	0 - 27
2328713	Thiobencarb	0.423	Spike	P	0 - 30
2328713	Triadimefon	15.8	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329830	2,4-D	12.2	Spike	P	0 - 30
2329830	2,4,5-T	6.95	Spike	P	0 - 30
2329830	Acetaminophen	0.691	Spike	P	0 - 30
2329830	Acetamiprid	11.9	Spike	P	0 - 30
2329830	Afidopyropen	9.69	Spike	P	0 - 30
2329830	Bentazon	4.80	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P414365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329830	Benzovindiflupyr	4.70	Spike	P	0 - 30
2329830	Carbamazepine	3.18	Spike	P	0 - 30
2329830	Clothianidin	3.31	Spike	P	0 - 30
2329830	Dinotefuran	1.79	Spike	P	0 - 30
2329830	Diuron	3.44	Spike	P	0 - 30
2329830	Fenuron	3.95	Spike	P	0 - 30
2329830	Fluridone	1.08	Spike	P	0 - 30
2329830	Hydrocodone	5.32	Spike	P	0 - 30
2329830	Ibuprofen	4.53	Spike	P	0 - 30
2329830	Imazapyr	6.53	Spike	P	0 - 30
2329830	Imidacloprid	1.12	Spike	P	0 - 30
2329830	Linuron	2.58	Spike	P	0 - 30
2329830	Mandestrobin	0.146	Spike	P	0 - 30
2329830	MCPP	7.83	Spike	P	0 - 30
2329830	Naproxen	9.58	Spike	P	0 - 30
2329830	Primidone	1.12	Spike	P	0 - 30
2329830	Pyraclostrobin	0.0307	Spike	P	0 - 30
2329830	Silvex	8.40	Spike	P	0 - 30
2329830	Thiamethoxam	4.95	Spike	P	0 - 30
2329830	Tolfenpyrad	4.60	Spike	P	0 - 30
2329830	Triclopyr	5.46	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P414387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329967	Acesulfame K	0.414	Spike	P	0 - 30
2329967	AMPA	4.89	Spike	P	0 - 30
2329967	Endothall	1.12	Spike	P	0 - 30
2329967	Glufosinate	2.43	Spike	P	0 - 30
2329967	Glyphosate	6.36	Spike	P	0 - 30
2329967	Sucralose	1.57	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P414539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330089	Total Alkalinity	0.261	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P414670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329935	TDS	5.38	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 D-2011
Batch ID: P414674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329935	TSS	3.45	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P415142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330089	Fluoride	1.03	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329782	Organic Carbon	0.739	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2329967
Field Sample ID: G2CE0212

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	77.2	P	30 - 160
EPA 8321B	Endothall-d6	94.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.7	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	132	P	30 - 160

Lab Sample ID: 2329968
Field Sample ID: G2CE0208

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	70.3	P	30 - 160
EPA 8321B	Endothall-d6	94.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.1	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160

Lab Sample ID: 2329971
Field Sample ID: G2CE0212

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	44.5	P	20 - 200
EPA 8270E	Simazine-d10	86.1	P	71 - 140
EPA 8270E	Terbufos-d10	84.2	P	62 - 131
EPA 8270E	Terphenyl-d14	74.9	P	52 - 141

Lab Sample ID: 2329972
Field Sample ID: G2CE0208

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	46.4	P	20 - 200
EPA 8270E	Simazine-d10	83.2	P	71 - 140
EPA 8270E	Terbufos-d10	84.6	P	62 - 131
EPA 8270E	Terphenyl-d14	60.9	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A112402

Included Lab Sample IDs: 2329959, 2329960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	105	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112403

Included Lab Sample IDs: 2329959, 2329960

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112422

Included Lab Sample IDs: 2329963, 2329964

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	98.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112457

Included Lab Sample IDs: 2329969, 2329970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.3	99.3	P/P	90 - 110
Antimony	97.4	96.8	P/P	90 - 110
Arsenic	98.3	97.4	P/P	90 - 110
Barium	97.6	96.5	P/P	90 - 110
Beryllium	92.7	93.2	P/P	90 - 110
Boron	100	99.8	P/P	90 - 110
Cadmium	98.1	97.4	P/P	90 - 110
Chromium	97.7	97.5	P/P	90 - 110
Cobalt	97.5	97.2	P/P	90 - 110
Copper	97.9	97.7	P/P	90 - 110
Lead	98.4	96.9	P/P	90 - 110
Manganese	97.9	97.7	P/P	90 - 110
Molybdenum	98.4	98.5	P/P	90 - 110
Nickel	98.3	97.9	P/P	90 - 110
Selenium	95.7	95.6	P/P	90 - 110
Silver	99.4	98.7	P/P	90 - 110
Thallium	98.5	95.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A112492

Included Lab Sample IDs: 2329961, 2329962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112498

Included Lab Sample IDs: 2329967, 2329968

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

Reference Method: EPA 8321B

Run ID: A112498

Included Lab Sample IDs: 2329967, 2329968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	93.4	91.3	P/P	60 - 160
Endothall	96.2	102	P/P	60 - 160
Glufosinate	102	102	P/P	60 - 160
Glyphosate	98.6	100	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A112499

Included Lab Sample IDs: 2329967, 2329968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	141	106	P/P	60 - 160
Sucralose	103	74.7	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A112501

Included Lab Sample IDs: 2329959, 2329960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.0	94.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112515

Included Lab Sample IDs: 2329967, 2329968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.5	103	P/P	50 - 150
2,4,5-T	104	98.7	P/P	50 - 150
Acetaminophen	108	106	P/P	60 - 160
Acetamiprid	104	104	P/P	50 - 150
Afidopyropen	101	98.5	P/P	50 - 150
Bentazon	108	109	P/P	50 - 160
Benzovindiflupyr	107	107	P/P	50 - 150
Carbamazepine	104	104	P/P	60 - 150
Clothianidin	110	104	P/P	60 - 150
Dinotefuran	102	102	P/P	50 - 150
Diuron	111	107	P/P	60 - 160
Fenuron	102	102	P/P	60 - 150
Fluridone	108	108	P/P	60 - 160
Hydrocodone	96.9	103	P/P	60 - 150
Ibuprofen	102	104	P/P	50 - 160
Imazapyr	100	92.2	P/P	50 - 150
Imidacloprid	99.5	100	P/P	60 - 150
Linuron	100	107	P/P	60 - 150
Mandestrobin	108	107	P/P	50 - 150
MCPP	98.8	102	P/P	50 - 150
Naproxen	93.7	78.1	P/P	50 - 160
Primidone	108	97.2	P/P	60 - 150
Pyraclostrobin	110	113	P/P	60 - 150
Silvex	102	102	P/P	50 - 150
Thiamethoxam	102	102	P/P	50 - 150
Tolfenpyrad	102	101	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A112515

Included Lab Sample IDs: 2329967, 2329968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	92.2	104	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112531

Included Lab Sample IDs: 2329961, 2329962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	96.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112541

Included Lab Sample IDs: 2329969, 2329970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	99.6	P/P	90 - 110
Iron	103	99.5	P/P	90 - 110
Magnesium	103	99.7	P/P	90 - 110
Potassium	104	102	P/P	90 - 110
Sodium	104	102	P/P	90 - 110
Tin	99.6	102	P/P	90 - 110
Titanium	101	100	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	100	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112552

Included Lab Sample IDs: 2329959, 2329960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.3	98.8	P/P	90 - 110
Sulfate	99.1	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112565

Included Lab Sample IDs: 2329961, 2329962

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

Reference Method: EPA 8270E

Run ID: A112585

Included Lab Sample IDs: 2329971, 2329972

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.8		P	80 - 120
Alachlor	90.2		P	80 - 120
Ametryn	96.9		P	80 - 120
Atrazine	95.5		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Azoxystrobin	95.7		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A112585

Included Lab Sample IDs: 2329971, 2329972

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	91.4		P	80 - 120
Butylate	99.1		P	80 - 120
Caffeine	101		P	80 - 120
Carbophenothion	98.4		P	80 - 120
Carfentrazone Ethyl	94.9		P	80 - 120
Chlorfenapyr	88.6		P	80 - 120
Chlorpyrifos Ethyl	98.6		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Coumaphos	99.4		P	80 - 120
Cyanazine	90.1		P	80 - 120
Cyprodinil	89.0		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	94.9		P	80 - 120
Difenoconazole	87.6		P	80 - 120
Dimethenamid	96.3		P	80 - 120
Dimethomorph	98.7		P	80 - 120
Disulfoton	97.8		P	80 - 120
Dithiopyr	93.5		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	97.8		P	80 - 120
Ethoprop	99.7		P	80 - 120
Etridiazole	93.1		P	80 - 120
Fenamiphos	97.6		P	80 - 120
Fenbuconazole	91.9		P	80 - 120
Fipronil	96.2		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	95.8		P	80 - 120
Fipronil Sulfone	89.7		P	80 - 120
Fluazifop-P-butyl	92.3		P	80 - 120
Fludioxonil	89.4		P	80 - 120
Flumioxazin	89.3		P	80 - 120
Flutolanil	91.8		P	80 - 120
Fluxapyroxad	86.9		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	95.6		P	80 - 120
Imazalil	90.9		P	80 - 120
Iprodione	108		P	80 - 120
Loratadine	98.7		P	80 - 120
Malathion	97.9		P	80 - 120
Metalaxyl	97.2		P	80 - 120
Metolachlor	94.8		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	99.3		P	80 - 120
Myclobutanil	90.1		P	80 - 120
Naled	98.9		P	80 - 120
Napropamide	93.4		P	80 - 120
Norflurazon	93.2		P	80 - 120
Oxadiazon	92.7		P	80 - 120
Oxyfluorfen	94.9		P	80 - 120
Parathion Ethyl	97.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A112585

Included Lab Sample IDs: 2329971, 2329972

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Methyl	94.6		P	80 - 120
Pendimethalin	93.8		P	80 - 120
Phenytoin	91.0		P	80 - 120
Phorate	104		P	80 - 120
Prodiamine	98.6		P	80 - 120
Prometon	93.3		P	80 - 120
Prometryn	94.5		P	80 - 120
Pronamide	88.9		P	80 - 120
Propanil	103		P	80 - 120
Propargite	97.0		P	80 - 120
Propiconazole	93.5		P	80 - 120
Pyraflufen Ethyl	92.1		P	80 - 120
Pyridaben	94.5		P	80 - 120
Pyriproxyfen	90.3		P	80 - 120
Simazine	97.9		P	80 - 120
Stirophos	106		P	80 - 120
Sulfentrazone	86.4		P	80 - 120
Tebuconazole	95.0		P	80 - 120
Terbufos	99.9		P	80 - 120
Terbutylazine	98.0		P	80 - 120
Thiobencarb	80.9		P	80 - 120
Triadimefon	98.6		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112599

Included Lab Sample IDs: 2329969, 2329970

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	96.9	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112613

Included Lab Sample IDs: 2329962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.6	98.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112620

Included Lab Sample IDs: 2329971, 2329972

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112754

Included Lab Sample IDs: 2329962

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112754

Included Lab Sample IDs: 2329962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	97.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112796

Included Lab Sample IDs: 2329959, 2329960

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.5	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112803

Included Lab Sample IDs: 2329961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112830

Included Lab Sample IDs: 2329961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	96.9	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			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	100					2.12	
EPA 180.1 Rev. 2.0	Turbidity	96.9					1.83	
EPA 200.7 Rev. 4.4	Calcium	104	103	104				0.719
	Iron	107	108	108	111			0.126
	Magnesium	110	111	109	114			0.675
	Potassium	105	102	102	105			0.102
	Sodium	103	102	110				1.48
	Strontium	93.9	94.1	99.4	111			5.41
	Tin	102	101	103	104			1.34
	Titanium	102	103	104	104			1.19
	Vanadium	95.2	98.4	99.6	99.7			1.22
	Zinc	100	102	104	102			1.41
EPA 200.8 Rev. 5.4	Aluminum	97.9	102	102	103			0.235
	Antimony	96.8	101	101	99.4			0.545
	Arsenic	97.7	100	99.7	99.6			0.655
	Barium	99.4	103	102	103			0.534
	Beryllium	95.3	86.1	98.1	93.3			13.1
	Boron	103	107	107	104			0.398
	Cadmium	94.7	100	97.9	99.5			2.64
	Chromium	95.7	100	98.9	98.0			1.41
	Cobalt	96.9	99.4	97.8	98.3			1.67
	Copper	96.2	99.6	98.9	98.6			0.632
	Lead	97.8	102	102	101			0.258
	Manganese	96.4	101	98.5	104			1.84
	Molybdenum	96.2	103	101	101			1.90
	Nickel	97.6	99.1	98.5	99.8			0.622
	Selenium	96.7	96.4	98.5	96.7			2.06
	Silver	97.2	99.0	97.4	98.4			1.60
	Thallium	98.7	104	107	103			2.72
EPA 300.0 Rev. 2.1	Chloride	98.1	97.2	97.6			0.551	
	Sulfate	98.2	97.2	98.2			0.754	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	97.6	98.6				0.955
	Ammonia-N	96.8	97.0	98.2				0.916
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.8	103	102				0.406
	Kjeldahl Nitrogen	97.4	98.9	102				2.87
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	94.4	94.8				0.409
EPA 365.1 Rev. 2.0	Total-P	101	104	101				1.42
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	99.0	99.5				0.504
EPA 8270E	Acetochlor	80.9	90.1	75.0				18.3
	Alachlor	81.7	82.1	72.1				13.0
	Ametryn	93.2	102	99.9				1.76
	Atrazine	80.7						4.12
	Atrazine Desethyl	70.2	63.9	56.4				10.7
	Avobenzone	97.6	108	110				1.41
	Azinphos Methyl	102	126	104				19.3
	Azoxystrobin	120	116	108				7.31
	Bromacil	65.8	82.3	71.8				13.6
	Butylate	52.0	49.9	41.5				18.3
	Caffeine	72.0	98.3	95.6				2.84
	Carbophenothion	74.6	77.4	66.8				14.8
	Carfentrazone Ethyl	92.2	95.0	86.7				9.09
	Chlorfenapyr	71.5	73.9	77.8				5.19
	Chlorpyrifos Ethyl	78.8	68.9	69.0				0.0625
	Chlorpyrifos Methyl	83.3	88.2	79.6				10.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Coumaphos	58.7	74.3	71.9			3.19
	Cyanazine	73.6	81.0	68.7			16.5
	Cyprodinil	95.7	100	83.2			18.6
	Demeton	68.5	111	92.5			17.8
	Diazinon	97.6	100	85.5			15.7
	Difenoconazole	168	102	92.5			9.37
	Dimethenamid	59.1	67.5	61.0			10.1
	Dimethomorph	126	88.7	46.6			62.2
	Disulfoton	93.4	84.4	82.2			2.65
	Dithiopyr	75.8	71.1	64.2			10.2
	EPTC	53.4	44.4	40.5			9.36
	Ethion	57.3	55.3	51.7			6.63
	Ethoprop	98.2	101	88.9			12.6
	Etridiazole	60.6	60.3	53.6			11.7
	Fenamiphos	62.4	86.1	88.5			2.79
	Fenbuconazole	76.1	84.8	74.5			13.0
	Fipronil	82.2	89.2	76.4			15.4
	Fipronil Desulfinyl	81.5	98.8	83.1			17.2
	Fipronil Sulfide	76.9	78.0	69.3			9.46
	Fipronil Sulfone	75.3	69.9	56.1			16.4
	Fluazifop-P-butyl	89.4	84.2	74.4			12.4
	Fludioxonil	63.1	76.8	67.1			13.5
	Flumioxazin	51.0	109	98.1			10.6
	Flutolanil	63.8	73.6	72.9			0.996
	Fluxapyroxad	119	64.0	56.0			13.2
	Fonofos	89.8	86.0	79.4			7.98
	Hexazinone	69.1	82.7	78.5			5.14
	Imazalil	63.2	94.1	91.6			2.71
	Iprodione	73.5	81.7	68.4			17.7
	Loratadine	143	87.2	95.1			8.69
	Malathion	80.0	79.9	78.7			0.613
	Metalaxyl	76.4	80.2	66.8			18.2
	Metolachlor	74.5	72.2	64.6			11.1
	Metribuzin	106	98.5	93.8			4.85
	Mevinphos	85.5	105	91.8			13.5
	Molinate	64.8	64.7	62.0			4.21
	Myclobutanil	58.2	86.2	75.9			12.8
	Naled	82.8	87.8	81.3			7.64
	Napropamide	41.9	64.8	56.8			13.2
	Norflurazon	64.3	76.3	65.1			15.8
	Octinoxate	61.6	42.3	52.7			21.8
	Oxadiazon	70.1	71.4	65.1			9.29
	Oxybenzone	69.5	53.6	157			98.2
	Oxyfluorfen	73.5	101	88.6			13.3
	Parathion Ethyl	90.9	87.1	76.3			13.2
	Parathion Methyl	116	124	112			10.1
	Pendimethalin	85.8	101	95.6			5.33
	Phenytoin	20.3	57.5	56.5			1.89
	Phorate	82.0	110	84.8			25.5
	Prodiamine	49.6	37.9	33.1			13.6
	Prometon	69.1	69.6	77.9			11.3
	Prometryn	88.5	87.1	74.5			15.6
	Pronamide	89.1	93.4	80.3			15.0
	Propanil	84.6	114	101			12.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Propargite	100	128	126			1.08
	Propiconazole	76.0	76.7	62.9			14.2
	Pyraflufen Ethyl	112	74.0	68.4			7.81
	Pyridaben	69.2	109	103			5.60
	Pyriproxyfen	38.4	79.3	69.0			13.8
	Simazine	81.5	94.8	80.1			16.9
	Stirophos	64.3	73.3	63.4			14.4
	Sulfentrazone	52.8	79.8	65.9			19.0
	Tebuconazole	20.7	40.5	37.6			5.56
	Terbufos	115	109	102			6.39
	Terbutylazine	83.3	90.1	75.1			18.1
	Thiobencarb	72.7	64.7	64.4			0.423
	Triadimefon	66.5	70.1	59.9			15.8
	Triadimefon	66.5	70.1	59.9			15.8
EPA 8321B	2,4-D	91.6	96.3	109			12.2
	2,4,5-T	80.7	87.3	93.5			6.95
	Acesulfame K	139	123	122			0.414
	Acetaminophen	66.4	97.5	98.2			0.691
	Acetamiprid	90.5	91.6	103			11.9
	Afidopyropen	68.7	77.2	85.1			9.69
	AMPA	102	98.5	93.8			4.89
	Bentazon	117	107	102			4.80
	Benzovindiflupyr	86.7	87.1	91.3			4.70
	Carbamazepine	105	102	106			3.18
	Clothianidin	100	99.6	103			3.31
	Dinotefuran	102	119	122			1.79
	Diuron	87.8	86.9	89.9			3.44
	Endothall	96.3	95.2	94.1			1.12
	Fenuron	99.1	91.1	94.7			3.95
	Fluridone	82.0	81.4	80.5			1.08
	Glufosinate	96.6	91.9	94.2			2.43
	Glyphosate	94.5	86.4	92.0			6.36
	Hydrocodone	91.2	92.3	97.3			5.32
	Ibuprofen	70.2	74.3	77.8			4.53
	Imazapyr	101	111	104			6.53
	Imidacloprid	94.6	105	104			1.12
	Linuron	71.9	71.5	69.7			2.58
	Mandestrobin	84.6	84.1	84.2			0.146
	MCPP	126	123	133			7.83
	Naproxen	81.6	71.7	78.9			9.58
	Primidone	97.3	102	101			1.12
	Pyraclostrobin	94.8	92.6	92.5			0.0307
	Silvex	74.0	77.9	84.8			8.40
	Sucralose	101	98.1	95.9			1.57
	Thiamethoxam	97.6	102	107			4.95
	Tolfenpyrad	50.9	41.4	43.4			4.60
	Triclopyr	87.6	90.2	95.2			5.46
SM 2320 B-2011	Total Alkalinity	94.5				0.261	
SM 2540 C-2011	TDS					5.38	
SM 2540 D-2011	TSS					3.45	
SM 4500-F- C-2011	Fluoride	93.8	96.3	97.4			1.03
SM 5310 B-2011	Organic Carbon	94.6	94.0	94.8			0.739

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2329959, 2329960
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2329959, 2329960
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2329969, 2329970
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2329969, 2329970
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2329959, 2329960
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2329959, 2329960
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2329961, 2329962
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2329961, 2329962
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2329961, 2329962
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2329961, 2329962
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2329963, 2329964
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2329971, 2329972
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2329971, 2329972
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2329967, 2329968
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2329959, 2329960
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2329969, 2329970
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2329959, 2329960
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2329959, 2329960
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2329959, 2329960
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2329961, 2329962

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	05/25/2022			05/25/2022 15:32	Samantha L Bates	2329959
	05/25/2022			05/25/2022 15:33	Samantha L Bates	2329960
EPA 180.1 Rev. 2.0	05/25/2022			05/25/2022 15:06	Khloe J Berg	2329959
	05/25/2022			05/25/2022 15:07	Khloe J Berg	2329960
EPA 200.7 Rev. 4.4	05/25/2022	05/26/2022 10:15	Megan Whitefoot	05/31/2022 23:48	McKinley C Carter	2329969
	05/25/2022	05/26/2022 10:15	Megan Whitefoot	05/31/2022 23:56	McKinley C Carter	2329970
	05/25/2022	05/26/2022 10:15	Megan Whitefoot	06/02/2022 20:26	McKinley C Carter	2329969
	05/25/2022	05/26/2022 10:15	Megan Whitefoot	06/02/2022 20:29	McKinley C Carter	2329970
EPA 200.8 Rev. 5.4	05/25/2022	05/26/2022 10:15	Megan Whitefoot	05/26/2022 20:29	Alexander Thompson	2329969
	05/25/2022	05/26/2022 10:15	Megan Whitefoot	05/26/2022 20:39	Alexander Thompson	2329970
EPA 300.0 Rev. 2.1	05/25/2022			06/01/2022 23:50	Anna M. Plaviak	2329959
	05/25/2022			06/02/2022 00:02	Anna M. Plaviak	2329960
EPA 350.1 Rev. 2.0	05/25/2022			06/10/2022 14:44	Ping Hua	2329962
	05/25/2022			06/14/2022 12:20	Ping Hua	2329961
EPA 351.2 Rev. 2.0	05/25/2022	06/02/2022 15:43	Samantha L Bates	06/03/2022 15:17	Alexandra J Mattheus	2329962
	05/25/2022	06/10/2022 11:23	Samantha L Bates	06/13/2022 18:18	Alexandra J Mattheus	2329961
EPA 353.2 Rev. 2.0	05/25/2022			06/01/2022 17:12	Nathaniel J Jones	2329961
	05/25/2022			06/01/2022 17:13	Nathaniel J Jones	2329962
EPA 365.1 Rev. 2.0	05/25/2022	05/27/2022 16:17	Adam P Silver	05/31/2022 16:33	James L Waggeberby	2329961
	05/25/2022	05/27/2022 16:17	Adam P Silver	05/31/2022 16:34	James L Waggeberby	2329962
EPA 365.1 Rev. 2.0 dissolved	05/25/2022			05/25/2022 18:28	Nathaniel J Jones	2329963
	05/25/2022			05/25/2022 18:29	Nathaniel J Jones	2329964
EPA 8270E	05/25/2022	05/26/2022 08:00	Fe-Val Siddell	05/27/2022 20:53	Vandana T. Nagar	2329971
	05/25/2022	05/26/2022 08:00	Fe-Val Siddell	05/27/2022 21:20	Vandana T. Nagar	2329972
	05/25/2022	05/26/2022 08:00	Fe-Val Siddell	06/01/2022 23:40	Arthur Maknenko	2329971
	05/25/2022	05/26/2022 08:00	Fe-Val Siddell	06/02/2022 00:05	Arthur Maknenko	2329972
EPA 8321B	05/25/2022	05/26/2022 09:30	June Rhew	05/29/2022 00:03	Juyoung Kim	2329967
	05/25/2022	05/26/2022 09:30	June Rhew	05/29/2022 00:38	Juyoung Kim	2329968
	05/25/2022	05/27/2022 09:30	Umesh Chiluwal	05/27/2022 11:47	Umesh Chiluwal	2329967
	05/25/2022	05/27/2022 09:30	Umesh Chiluwal	05/27/2022 12:00	Umesh Chiluwal	2329968
	05/25/2022	05/27/2022 09:30	Umesh Chiluwal	05/28/2022 00:58	Umesh Chiluwal	2329967
	05/25/2022	05/27/2022 09:30	Umesh Chiluwal	05/28/2022 01:13	Umesh Chiluwal	2329968
SM 2320 B-2011	05/25/2022			05/27/2022 12:01	Dale L. Simmons	2329959
	05/25/2022			05/27/2022 12:13	Dale L. Simmons	2329960
SM 2340 B-2011	05/25/2022			05/31/2022 23:48	McKinley C Carter	2329969
	05/25/2022			05/31/2022 23:56	McKinley C Carter	2329970
SM 2540 C-2011	05/25/2022			05/27/2022 14:56	Yijie Li	2329959, 2329960
SM 2540 D-2011	05/25/2022			05/27/2022 14:56	Yijie Li	2329959, 2329960
SM 4500-F- C-2011	05/25/2022			06/14/2022 08:12	Dale L. Simmons	2329959
	05/25/2022			06/14/2022 08:17	Dale L. Simmons	2329960

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	05/25/2022			05/28/2022 06:08	Khloe J Berg	2329961
	05/25/2022			05/28/2022 06:23	Khloe J Berg	2329962