

Chemical Analysis Report

CEN-DIST-2022-05-12-01

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

Event Description: **Hidden Lake LVI**
Request ID: **RQ-2022-05-09-20**
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: Liang Lin, Environmental Administrator

Date Certified: 07-JUN-2022 09:01

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

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: Hidden Lake @ Center

Collection Date/Time: 05/11/2022 11:05

Field ID: G4CE0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes	
2326674	DEP SOP: NU-094-1	Color (true)**	82	A	PCU	P413772		
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P413777		
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P414105		
		Sulfate	0.90		mg SO4/L	P414109		
	SM 2320 B-2011	Total Alkalinity	122		mg CaCO3/L	P414066		
	SM 2540 C-2011	TDS	202	A	mg/L	P414397		
	SM 2540 D-2011	TSS	3	IA	mg/L	P414312		
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P414069	MS	
	2326675	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P414330	
		EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P414077	
EPA 353.2 Rev. 2.0		NO2NO3-N	0.020		mg N/L	P413933		
EPA 365.1 Rev. 2.0		Total-P	0.050		mg P/L	P413996		
SM 5310 B-2011		Organic Carbon	20		mg C/L	P413969		
2326680	EPA 8321B	2,4-D	0.0020	U	ug/L	P413908		
		Acesulfame K	0.10	U	ug/L	P413829		
		2,4,5-T	0.0040	U	ug/L	P413908		
		AMPA	0.10	U	ug/L	P413829		
		Acetaminophen	0.0080	U	ug/L	P413908		
		Acetamiprid	0.0020	U	ug/L	P413908		
		Endothall	0.25	U	ug/L	P413829	MS	
		Glufosinate	0.10	U	ug/L	P413829		
		Glyphosate	0.10	U	ug/L	P413829		
		Afidopyropen	0.0020	U	ug/L	P413908		
		Bentazon	0.065		ug/L	P413908		
		Sucralose	0.29		ug/L	P413829		
		Benzovindiflupyr	0.0020	U	ug/L	P413908		
		Carbamazepine	8.0E-04	U	ug/L	P413908		
		Clothianidin	0.0020	U	ug/L	P413908		
		Dinotefuran	0.0020	U	ug/L	P413908		
		Diuron	0.0020	U	ug/L	P413908		
		Fenuron	0.032	U	ug/L	P413908		
		Fluridone	0.0079		ug/L	P413908		
		Imazapyr	0.050		ug/L	P413908		
		Hydrocodone	0.0020	U	ug/L	P413908		
		Ibuprofen	0.020	U	ug/L	P413908		
		Imidacloprid	0.0045	I	ug/L	P413908		
		Linuron	0.0040	U	ug/L	P413908		
		Mandestrobin	0.0020	U	ug/L	P413908		
		MCPP	0.0040	U	ug/L	P413908		
		Naproxen	0.0080	U	ug/L	P413908		
		Primidone	0.0040	U	ug/L	P413908		
		Pyraclostrobin	0.0020	U	ug/L	P413908		
		Silvex	0.0040	U	ug/L	P413908		
		Thiamethoxam	0.0020	U	ug/L	P413908		

Field ID: G4CE0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2326680	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P413908	
		Triclopyr	0.0040	U	ug/L	P413908	
2326681	EPA 200.7 Rev. 4.4	Calcium	51.5		mg/L	P413783	
		Iron	330		ug/L	P413783	
		Magnesium	3.80		mg/L	P413783	
		Potassium	4.1		mg/L	P413783	
		Sodium	10.3		mg/L	P413783	
		Strontium	53.3		ug/L	P413783	
		Tin	3.0	U	ug/L	P413783	
		Titanium	1.1	I	ug/L	P413783	
		Vanadium	2.0	U	ug/L	P413783	
		Zinc	5.0	U	ug/L	P413783	
	EPA 200.8 Rev. 5.4	Aluminum	5.4	I	ug/L	P413783	
		Antimony	0.050	U	ug/L	P413783	
		Arsenic	0.67		ug/L	P413783	
		Barium	16.1		ug/L	P413783	
		Beryllium	0.010	U	ug/L	P413783	
		Boron**	30.6		ug/L	P413783	
		Cadmium	0.020	U	ug/L	P413783	
		Chromium	0.40	U	ug/L	P413783	
		Cobalt	0.046	I	ug/L	P413783	
		Copper	0.40	U	ug/L	P413783	
		Lead	0.20	U	ug/L	P413783	
		Manganese	18.1		ug/L	P413783	
		Molybdenum	0.22	I	ug/L	P413783	
		Nickel	0.50	U	ug/L	P413783	
		Selenium	0.20	U	ug/L	P413783	
		Silver	0.010	U	ug/L	P413783	
		Thallium	0.10	U	ug/L	P413783	
	SM 2340 B-2011	Hardness	144		mg/L	P413783	
2326682	EPA 8270E	Oxybenzone**	210		ng/L	P413852	
		Acetochlor	0.27	U	ng/L	P413852	
		Octinoxate**	21	U	ng/L	P413852	
		Alachlor	0.27	U	ng/L	P413852	
		Avobenzone**	110	U	ng/L	P413852	
		Ametryn	0.64	U	ng/L	P413852	
		Atrazine	8.0		ng/L	P413852	
		Atrazine Desethyl	3.5	I	ng/L	P413852	
		Azinphos Methyl	2.1	U	ng/L	P413852	
		Azoxystrobin**	0.53	U	ng/L	P413852	
		Bromacil	0.53	U	ng/L	P413852	
		Butylate	0.43	U	ng/L	P413852	
		Caffeine**	26	I	ng/L	P413852	
		Carbophenothion	0.21	U	ng/L	P413852	
		Carfentrazone Ethyl**	0.11	U	ng/L	P413852	

Field ID: G4CE0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2326682	EPA 8270E	Chlorfenapyr**	0.19	U	ng/L	P413852	MS
		Chlorpyrifos Ethyl	0.27	U	ng/L	P413852	
		Chlorpyrifos Methyl	0.053	U	ng/L	P413852	
		Coumaphos**	0.53	U	ng/L	P413852	
		Cyanazine	3.5	U	ng/L	P413852	
		Cyprodinil**	0.11	U	ng/L	P413852	
		Demeton	1.6	U	ng/L	P413852	
		Diazinon	0.13	U	ng/L	P413852	
		Difenoconazole**	0.64	U	ng/L	P413852	
		Dimethenamid**	0.11	U	ng/L	P413852	
		Dimethomorph**	0.19	U	ng/L	P413852	
		Disulfoton	0.53	U	ng/L	P413852	
		Dithiopyr**	0.20	I	ng/L	P413852	
		EPTC	1.3	U	ng/L	P413852	
		Ethion	0.16	U	ng/L	P413852	
		Ethoprop	0.11	U	ng/L	P413852	
		Etridiazole**	0.16	U	ng/L	P413852	
		Fenamiphos	0.53	U	ng/L	P413852	
		Fenbuconazole**	0.13	U	ng/L	P413852	
		Fipronil	0.27	U	ng/L	P413852	
		Fipronil Desulfinyl**	0.15	I	ng/L	P413852	
		Fipronil Sulfide	0.16	U	ng/L	P413852	
		Fipronil Sulfone	0.17	I	ng/L	P413852	
		Fluazifop-P-butyl**	0.11	U	ng/L	P413852	
		Fludioxonil**	0.13	U	ng/L	P413852	
		Flumioxazin**	1.9	U	ng/L	P413852	
		Flutolanil**	0.11	I	ng/L	P413852	
		Fluxapyroxad**	0.12	I	ng/L	P413852	
		Fonofos	0.21	U	ng/L	P413852	
		Hexazinone	0.53	U	ng/L	P413852	
		Imazalil**	0.80	U	ng/L	P413852	
		Iprodione**	0.64	U	ng/L	P413852	
		Loratadine**	0.11	U	ng/L	P413852	
		Malathion	0.37	U	ng/L	P413852	
		Metalaxyl	0.80	U	ng/L	P413852	
		Metolachlor	0.37	U	ng/L	P413852	
		Metribuzin	2.7	U	ng/L	P413852	
		Mevinphos	1.1	U	ng/L	P413852	
		Molinate	0.32	U	ng/L	P413852	
		Myclobutanil**	0.27	U	ng/L	P413852	
		Naled**	1.6	U	ng/L	P413852	
		Napropamide**	0.43	U	ng/L	P413852	
		Norflurazon	0.53	U	ng/L	P413852	
		Oxadiazon	0.86	I	ng/L	P413852	
		Oxyfluorfen**	0.16	U	ng/L	P413852	

Field ID: G4CE0158

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2326682	EPA 8270E	Parathion Ethyl	0.27	U	ng/L	P413852	
		Parathion Methyl	0.59	U	ng/L	P413852	
		Pendimethalin	1.1	U	ng/L	P413852	
		Phenytoin**	3.7	U	ng/L	P413852	
		Phorate	0.56	U	ng/L	P413852	
		Prodiamine**	0.19	U	ng/L	P413852	
		Prometon	0.96	U	ng/L	P413852	
		Prometryn	0.21	U	ng/L	P413852	
		Pronamide**	0.16	U	ng/L	P413852	
		Propanil**	0.13	U	ng/L	P413852	
		Propargite**	1.6	U	ng/L	P413852	
		Propiconazole**	0.53	U	ng/L	P413852	
		Pyraflufen Ethyl**	0.27	U	ng/L	P413852	
		Pyridaben**	0.48	U	ng/L	P413852	
		Pyriproxyfen**	0.13	U	ng/L	P413852	
		Simazine	0.53	U	ng/L	P413852	
		Stirophos**	0.13	U	ng/L	P413852	
		Sulfentrazone**	4.4		ng/L	P413852	
		Tebuconazole**	0.53	U	ng/L	P413852	
		Terbufos	0.11	U	ng/L	P413852	
		Terbuthylazine	0.45	U	ng/L	P413852	
2326697	EPA 365.1 Rev. 2.0 dissolved	Thiobencarb**	0.64	U	ng/L	P413852	
		Triadimefon**	0.27	U	ng/L	P413852	
		O-Phosphate-P	0.004	U	mg P/L	P413768	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P413772

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413777

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413783

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: P413783

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: P414105

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: P414109

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414330

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414077

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413933

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413996

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413768

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

Reference Method: EPA 8270E
Batch ID: P413852

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P413852

Component	Result	Code	Units
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P413852

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P413852

Component	Result	Code	Units
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
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
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: P413829

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P413829

Component	Result	Code	Units
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: EPA 8321B

Batch ID: P413908

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: SM 2320 B-2011

Batch ID: P414066

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

Reference Method: SM 2540 C-2011

Batch ID: P414397

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P414312

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P414069

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P413969

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: P413772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413777

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	108		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	106		P	85 - 115
Sodium	110		P	85 - 115
Strontium	103		P	85 - 115
Tin	106		P	85 - 115
Titanium	106		P	85 - 115
Vanadium	99.4		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	99.3		P	85 - 115
Arsenic	98.8		P	85 - 115
Barium	103		P	85 - 115
Beryllium	94.2		P	85 - 115
Boron	102		P	85 - 115
Cadmium	97.8		P	85 - 115
Chromium	96.0		P	85 - 115
Cobalt	97.5		P	85 - 115
Copper	96.8		P	85 - 115
Lead	94.0		P	85 - 115
Manganese	98.2		P	85 - 115
Molybdenum	98.8		P	85 - 115
Nickel	98.6		P	85 - 115
Selenium	99.4		P	85 - 115
Silver	98.7		P	85 - 115
Thallium	95.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414105

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P414109

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P414330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P414077

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P413933

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P413996

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: P413768

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

Reference Method: EPA 8270E
 Batch ID: P413852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	110		P	70 - 121
Alachlor	99.9		P	68 - 119
Ametryn	135		P	64 - 139
Atrazine	94.7		P	76 - 120
Atrazine Desethyl	67.3		P	44 - 126
Avobenzone	116		P	76 - 212
Azinphos Methyl	142		P	43 - 192
Azoxystrobin	105		P	36 - 224
Bromacil	79.8		P	52 - 121
Butylate	61.7		P	28 - 91.0
Caffeine	82.0		P	50 - 134
Carbophenothion	96.5		P	56 - 129
Carfentrazone Ethyl	124		P	60 - 141
Chlorfenapyr	85.1		P	56 - 115
Chlorpyrifos Ethyl	88.9		P	60 - 118
Chlorpyrifos Methyl	95.4		P	68 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P413852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Coumaphos	171		P	18 - 250
Cyanazine	194		P	61 - 250
Cyprodinil	139		P	55 - 145
Demeton	86.1		P	30 - 159
Diazinon	116		P	70 - 123
Difenoconazole	183		P	49 - 204
Dimethenamid	88.1		P	64 - 115
Dimethomorph	116		P	12 - 219
Disulfoton	99.2		P	44 - 125
Dithiopyr	99.2		P	64 - 115
EPTC	63.4		P	28 - 86.0
Ethion	72.9		P	33 - 125
Ethoprop	104		P	64 - 116
Etridiazole	69.4		P	34 - 91.0
Fenamiphos	104		P	12 - 127
Fenbuconazole	74.6		P	59 - 151
Fipronil	121		P	67 - 129
Fipronil Desulfinyl	108		P	65 - 127
Fipronil Sulfide	84.4		P	61 - 116
Fipronil Sulfone	100		P	55 - 117
Fluazifop-P-butyl	107		P	62 - 127
Fludioxonil	123		P	62 - 128
Flumioxazin	162		P	33 - 250
Flutolanil	111		P	56 - 127
Fluxapyroxad	64.2		P	45 - 128
Fonofos	88.5		P	62 - 111
Hexazinone	96.3		P	46 - 139
Imazalil	93.2		P	38 - 142
Iprodione	82.3		P	47 - 135
Loratadine	113		P	10 - 244
Malathion	96.8		P	61 - 139
Metalaxyl	93.5		P	10 - 119
Metolachlor	101		P	65 - 118
Metribuzin	89.0		P	51 - 250
Mevinphos	88.3		P	53 - 121
Molinate	76.7		P	42 - 96.0
Myclobutanil	73.7		P	55 - 128
Naled	78.5		P	10 - 98.0
Napropamide	89.2		P	49 - 121
Norflurazon	72.4		P	61 - 126
Octinoxate	82.2		P	30 - 159
Oxadiazon	91.5		P	59 - 116
Oxybenzone	78.3		P	61 - 139
Oxyfluorfen	109		P	64 - 137
Parathion Ethyl	99.6		P	70 - 112
Parathion Methyl	113		P	76 - 133
Pendimethalin	58.8		P	52 - 117
Phenytoin	20.8		P	10 - 199
Phorate	94.7		P	48 - 121
Prodiamine	75.6		P	26 - 142
Prometon	72.5		P	43 - 123
Prometryn	127		P	66 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P413852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pronamide	104		P	75 - 121
Propanil	87.2		P	45 - 150
Propargite	139		P	42 - 208
Propiconazole	75.4		P	60 - 125
Pyraflufen Ethyl	133		P	70 - 138
Pyridaben	142		P	35 - 245
Pyriproxyfen	122		P	30 - 149
Simazine	90.9		P	72 - 125
Stirophos	84.6		P	29 - 164
Sulfentrazone	43.6		P	21 - 139
Tebuconazole	20.7		P	10 - 115
Terbufos	122		P	60 - 123
Terbuthylazine	92.7		P	72 - 115
Thiobencarb	94.0		P	31 - 139
Triadimefon	92.7		P	65 - 116

Reference Method: EPA 8321B

Batch ID: P413829

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	98.9		P	40 - 150
AMPA	50.1		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	75.2		P	40 - 150
Glyphosate	65.2		P	40 - 150
Sucralose	87.5		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	68.8		P	40 - 150
2,4,5-T	52.3		P	40 - 150
Acetaminophen	59.2		P	30 - 150
Acetamiprid	93.4		P	40 - 150
Afidopyropen	65.2		P	30 - 150
Bentazon	98.3		P	30 - 150
Benzovindiflupyr	95.3		P	40 - 150
Carbamazepine	88.3		P	40 - 150
Clothianidin	95.5		P	40 - 150
Dinotefuran	93.7		P	40 - 150
Diuron	84.1		P	40 - 150
Fenuron	104		P	40 - 150
Fluridone	82.2		P	40 - 150
Hydrocodone	93.0		P	40 - 150
Ibuprofen	59.1		P	40 - 150
Imazapyr	86.2		P	40 - 150
Imidacloprid	93.4		P	40 - 150
Linuron	78.6		P	40 - 150
Mandestrobin	80.7		P	40 - 150
MCPP	73.2		P	40 - 150
Naproxen	62.2		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P413908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Primidone	85.3		P	40 - 150
Pyraclostrobin	79.1		P	40 - 150
Silvex	44.1		P	40 - 150
Thiamethoxam	98.0		P	40 - 150
Tolfenpyrad	52.2		P	30 - 150
Triclopyr	51.7		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P414066

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P414069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326127	Calcium	106		P	80 - 120
2326127	Iron	107	102	P/P	80 - 120
2326127	Magnesium	105		P	80 - 120
2326127	Potassium	112	109	P/P	80 - 120
2326127	Sodium	110	107	P/P	80 - 120
2326127	Strontium	103	101	P/P	80 - 120
2326127	Tin	101	99.6	P/P	80 - 120
2326127	Titanium	103	101	P/P	80 - 120
2326127	Vanadium	99.0	97.2	P/P	80 - 120
2326127	Zinc	99.6	98.4	P/P	80 - 120
2326343	Calcium	93.0		P	80 - 120
2326343	Iron	102		P	80 - 120
2326343	Magnesium	95.5		P	80 - 120
2326343	Potassium	92.8		P	80 - 120
2326343	Sodium	94.2		P	80 - 120
2326343	Strontium	99.3		P	80 - 120
2326343	Tin	96.0		P	80 - 120
2326343	Titanium	100		P	80 - 120
2326343	Vanadium	96.2		P	80 - 120
2326343	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326127	Aluminum	100	102	P/P	80 - 120
2326127	Antimony	100	99.4	P/P	80 - 120
2326127	Arsenic	98.1	99.1	P/P	80 - 120
2326127	Barium	102	101	P/P	80 - 120
2326127	Beryllium	93.3	92.1	P/P	80 - 120
2326127	Boron	103	105	P/P	80 - 120
2326127	Cadmium	99.9	98.8	P/P	80 - 120
2326127	Chromium	97.3	98.5	P/P	80 - 120
2326127	Cobalt	96.2	96.0	P/P	80 - 120
2326127	Copper	93.3	93.0	P/P	80 - 120
2326127	Lead	94.2	93.6	P/P	80 - 120
2326127	Manganese	98.7	99.0	P/P	80 - 120
2326127	Molybdenum	101	102	P/P	80 - 120
2326127	Nickel	95.7	96.1	P/P	80 - 120
2326127	Selenium	98.4	99.2	P/P	80 - 120
2326127	Silver	97.4	97.3	P/P	80 - 120
2326127	Thallium	97.8	97.1	P/P	80 - 120
2326343	Aluminum	101		P	75 - 125
2326343	Antimony	102		P	75 - 125
2326343	Arsenic	101		P	75 - 125
2326343	Barium	104		P	75 - 125
2326343	Beryllium	92.6		P	75 - 125
2326343	Boron	103		P	75 - 125
2326343	Cadmium	102		P	75 - 125
2326343	Chromium	98.4		P	75 - 125
2326343	Cobalt	99.2		P	75 - 125
2326343	Copper	96.8		P	75 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326343	Lead	96.2		P	75 - 125
2326343	Molybdenum	103		P	75 - 125
2326343	Nickel	96.8		P	75 - 125
2326343	Selenium	101		P	75 - 125
2326343	Silver	95.3		P	75 - 125
2326343	Thallium	99.4		P	75 - 125

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326287	Chloride	98.8		P	90 - 110
2326442	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P414109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326287	Sulfate	96.5		P	90 - 110
2326442	Sulfate	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P414330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326731	Ammonia-N	94.4	93.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P414077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326588	Kjeldahl Nitrogen	102	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P413933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326675	NO2NO3-N	96.2	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P413996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326646	Total-P	101	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P413768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326649	O-Phosphate-P	93.6	93.6	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P413852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326579	Acetochlor	104	114	P/P	65 - 124
2326579	Alachlor	94.6	98.4	P/P	61 - 121
2326579	Ametryn	117	106	P/P	52 - 216
2326579	Avobenzone	116	111	P/P	59 - 206
2326579	Azinphos Methyl	177	173	P/P	40 - 292
2326579	Azoxystrobin	107	126	P/P	12 - 242
2326579	Bromacil	90.9	98.2	P/P	54 - 167
2326579	Butylate	51.0	50.6	P/P	14 - 94.0
2326579	Caffeine	98.4	94.2	P/P	10 - 226
2326579	Carbophenothion	89.0	103	P/P	49 - 122
2326579	Carfentrazone Ethyl	117	121	P/P	53 - 138
2326579	Chlorfenapyr	78.0	88.4	P/P	50 - 150
2326579	Chlorpyrifos Ethyl	83.0	95.7	P/P	52 - 122
2326579	Chlorpyrifos Methyl	83.8	97.2	P/P	66 - 117
2326579	Coumaphos	156	171	P/P	50 - 220
2326579	Cyanazine	185	197	P/P	43 - 245
2326579	Cyprodinil	130	139	P/P	50 - 150
2326579	Demeton	85.9	88.8	P/P	43 - 188
2326579	Diazinon	112	118	P/P	69 - 131
2326579	Difenoconazole	181	224	P/P	34 - 231
2326579	Dimethenamid	86.8	91.5	P/P	55 - 118
2326579	Dimethomorph	97.1	114	P/P	50 - 150
2326579	Disulfoton	84.8	102	P/P	38 - 141
2326579	Dithiopyr	98.6	105	P/P	42 - 116
2326579	EPTC	55.0	58.6	P/P	18 - 85.0
2326579	Ethion	76.9	86.3	P/P	10 - 131
2326579	Ethoprop	104	114	P/P	65 - 129
2326579	Etridiazole	62.1	61.1	P/P	50 - 150
2326579	Fenamiphos	86.8	105	P/P	31 - 137
2326579	Fenbuconazole	146	156	P/P	57 - 160
2326579	Fipronil	119	126	P/P	62 - 132
2326579	Fipronil Desulfinyl	105	111	P/P	57 - 131
2326579	Fipronil Sulfide	80.9	93.2	P/P	15 - 138
2326579	Fluazifop-P-butyl	108	115	P/P	54 - 133
2326579	Fludioxonil	120	130	P/F	58 - 127
2326579	Flumioxazin	196	205	P/P	33 - 300
2326579	Flutolanil	105	111	P/P	42 - 130
2326579	Fluxapyroxad	64.9	79.6	P/P	23 - 141
2326579	Fonofos	89.3	86.0	P/P	58 - 119
2326579	Hexazinone	100	108	P/P	68 - 172
2326579	Imazalil	78.1	86.9	P/P	48 - 283
2326579	Iprodione	75.6	88.8	P/P	38 - 140
2326579	Loratadine	96.5	115	P/P	50 - 150
2326579	Malathion	103	111	P/P	40 - 137
2326579	Metalaxyl	88.9	93.0	P/P	21 - 129
2326579	Metolachlor	96.2	104	P/P	55 - 122
2326579	Metribuzin	91.2	89.3	P/P	38 - 187
2326579	Mevinphos	87.2	93.9	P/P	54 - 134
2326579	Molinate	70.9	77.7	P/P	41 - 97.0
2326579	Myclobutanil	82.1	87.4	P/P	56 - 125
2326579	Naled	80.9	91.5	P/P	10 - 108
2326579	Napropamide	84.8	91.5	P/P	50 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P413852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326579	Norflurazon	64.3	75.9	P/P	32 - 122
2326579	Octinoxate	79.4	79.5	P/P	25 - 150
2326579	Oxadiazon	81.9	89.5	P/P	40 - 119
2326579	Oxybenzone	80.9	80.0	P/P	59 - 147
2326579	Oxyfluorfen	123	135	P/P	61 - 153
2326579	Parathion Ethyl	93.2	101	P/P	59 - 130
2326579	Parathion Methyl	109	116	P/P	65 - 155
2326579	Pendimethalin	90.2	102	P/P	49 - 138
2326579	Phenytoin	75.4	73.7	P/P	50 - 200
2326579	Phorate	77.6	82.5	P/P	54 - 161
2326579	Prodiamine	114	134	P/P	33 - 161
2326579	Prometon	112	137	P/P	48 - 140
2326579	Prometryn	124	133	P/P	55 - 134
2326579	Pronamide	105	111	P/P	66 - 137
2326579	Propanil	86.5	92.0	P/P	50 - 150
2326579	Propargite	145	148	P/P	50 - 200
2326579	Propiconazole	136	138	P/P	36 - 150
2326579	Pyraflufen Ethyl	129	136	P/P	50 - 150
2326579	Pyriproxyfen	139	148	P/P	10 - 165
2326579	Stiropfos	84.7	94.0	P/P	50 - 150
2326579	Sulfentrazone	128	105	P/P	34 - 140
2326579	Tebuconazole	40.7	40.6	P/P	10 - 127
2326579	Terbufos	115	128	P/P	59 - 138
2326579	Terbuthylazine	95.6	103	P/P	68 - 119
2326579	Thiobencarb	93.2	98.1	P/P	50 - 150
2326579	Triadimefon	89.3	94.6	P/P	50 - 150

Reference Method: EPA 8321B

Batch ID: P413829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326637	Acesulfame K	101	101	P/P	40 - 150
2326637	AMPA	49.0	49.7	P/P	40 - 150
2326637	Endothall	175	183	F/F	40 - 150
2326637	Glufosinate	68.1	61.6	P/P	40 - 150
2326637	Glyphosate	56.7	57.7	P/P	40 - 150
2326637	Sucralose	97.7	97.1	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326540	2,4-D	75.8	75.9	P/P	40 - 150
2326540	2,4,5-T	59.0	59.4	P/P	40 - 150
2326540	Acetaminophen	51.6	51.1	P/P	30 - 150
2326540	Acetamiprid	96.7	101	P/P	40 - 150
2326540	Afidopyropen	81.6	79.0	P/P	30 - 150
2326540	Bentazon	99.5	99.3	P/P	30 - 150
2326540	Benzovindiflupyr	88.2	86.7	P/P	40 - 150
2326540	Carbamazepine	89.4	88.9	P/P	40 - 150
2326540	Clothianidin	65.8	69.0	P/P	40 - 150
2326540	Dinotefuran	92.8	96.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P413908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326540	Diuron	78.0	86.7	P/P	40 - 150
2326540	Fenuron	90.9	94.0	P/P	40 - 150
2326540	Fluridone	80.9	81.7	P/P	40 - 150
2326540	Hydrocodone	85.6	89.2	P/P	40 - 150
2326540	Ibuprofen	59.9	61.9	P/P	40 - 150
2326540	Imazapyr	73.6	77.6	P/P	40 - 150
2326540	Imidacloprid	79.7	83.2	P/P	40 - 150
2326540	Linuron	71.3	68.7	P/P	40 - 150
2326540	Mandestrobin	76.6	78.4	P/P	40 - 150
2326540	MCP	77.1	77.9	P/P	40 - 150
2326540	Naproxen	65.7	62.7	P/P	40 - 150
2326540	Primidone	68.7	74.5	P/P	40 - 150
2326540	Pyraclostrobin	72.9	77.3	P/P	40 - 150
2326540	Silvex	58.4	53.6	P/P	40 - 150
2326540	Thiamethoxam	83.6	86.6	P/P	40 - 150
2326540	Tolfenpyrad	44.0	46.8	P/P	30 - 150
2326540	Triclopyr	63.2	59.0	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P414069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327113	Fluoride	106	107	F/F	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P413969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326583	Organic Carbon	97.5	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326674	Color (true)	0.774	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326585	Turbidity	6.23	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326127	Calcium	1.76	Spike	P	0 - 20
2326127	Iron	3.75	Spike	P	0 - 20
2326127	Magnesium	3.31	Spike	P	0 - 20
2326127	Potassium	3.29	Spike	P	0 - 20
2326127	Sodium	1.29	Spike	P	0 - 20
2326127	Strontium	1.48	Spike	P	0 - 20
2326127	Tin	1.65	Spike	P	0 - 20
2326127	Titanium	2.15	Spike	P	0 - 20
2326127	Vanadium	1.84	Spike	P	0 - 20
2326127	Zinc	1.24	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326127	Aluminum	1.49	Spike	P	0 - 20
2326127	Antimony	0.901	Spike	P	0 - 20
2326127	Arsenic	1.03	Spike	P	0 - 20
2326127	Barium	0.508	Spike	P	0 - 20
2326127	Beryllium	1.35	Spike	P	0 - 20
2326127	Boron	1.88	Spike	P	0 - 20
2326127	Cadmium	1.07	Spike	P	0 - 20
2326127	Chromium	1.21	Spike	P	0 - 20
2326127	Cobalt	0.206	Spike	P	0 - 20
2326127	Copper	0.272	Spike	P	0 - 20
2326127	Lead	0.628	Spike	P	0 - 20
2326127	Manganese	0.198	Spike	P	0 - 20
2326127	Molybdenum	0.203	Spike	P	0 - 20
2326127	Nickel	0.408	Spike	P	0 - 20
2326127	Selenium	0.814	Spike	P	0 - 20
2326127	Silver	0.0748	Spike	P	0 - 20
2326127	Thallium	0.664	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326287	Chloride	0.0520	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326287	Sulfate	0.0441	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326731	Ammonia-N	0.709	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326588	Kjeldahl Nitrogen	4.89	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326675	NO2NO3-N	0.948	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326646	Total-P	3.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326649	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P413852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326579	Acetochlor	8.74	Spike	P	0 - 27
2326579	Alachlor	3.98	Spike	P	0 - 27

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P413852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326579	Ametryn	6.43	Spike	P	0 - 34
2326579	Atrazine	11.3	Spike	P	0 - 41
2326579	Atrazine Desethyl	5.49	Spike	P	0 - 38
2326579	Avobenzone	3.81	Spike	P	0 - 30
2326579	Azinphos Methyl	2.44	Spike	P	0 - 62
2326579	Azoxystrobin	8.66	Spike	P	0 - 32
2326579	Bromacil	7.78	Spike	P	0 - 30
2326579	Butylate	0.738	Spike	P	0 - 59
2326579	Caffeine	4.20	Spike	P	0 - 60
2326579	Carbophenothion	14.7	Spike	P	0 - 25
2326579	Carfentrazone Ethyl	2.89	Spike	P	0 - 26
2326579	Chlorfenapyr	12.5	Spike	P	0 - 30
2326579	Chlorpyrifos Ethyl	14.2	Spike	P	0 - 27
2326579	Chlorpyrifos Methyl	14.8	Spike	P	0 - 26
2326579	Coumaphos	9.27	Spike	P	0 - 30
2326579	Cyanazine	6.52	Spike	P	0 - 58
2326579	Cyprodinil	6.61	Spike	P	0 - 30
2326579	Demeton	3.33	Spike	P	0 - 25
2326579	Diazinon	5.56	Spike	P	0 - 29
2326579	Difenoconazole	21.4	Spike	P	0 - 25
2326579	Dimethenamid	5.23	Spike	P	0 - 30
2326579	Dimethomorph	16.3	Spike	P	0 - 30
2326579	Disulfoton	18.4	Spike	P	0 - 33
2326579	Dithiopyr	6.25	Spike	P	0 - 22
2326579	EPTC	6.30	Spike	P	0 - 38
2326579	Ethion	11.6	Spike	P	0 - 79
2326579	Ethoprop	9.20	Spike	P	0 - 23
2326579	Etridiazole	1.50	Spike	P	0 - 30
2326579	Fenamiphos	18.5	Spike	P	0 - 58
2326579	Fenbuconazole	6.13	Spike	P	0 - 37
2326579	Fipronil	5.54	Spike	P	0 - 33
2326579	Fipronil Desulfinyl	4.07	Spike	P	0 - 26
2326579	Fipronil Sulfide	11.1	Spike	P	0 - 37
2326579	Fipronil Sulfone	6.31	Spike	P	0 - 50
2326579	Fluazifop-P-butyl	5.55	Spike	P	0 - 24
2326579	Fludioxonil	8.40	Spike	P	0 - 26
2326579	Flumioxazin	4.55	Spike	P	0 - 37
2326579	Flutolanil	5.73	Spike	P	0 - 26
2326579	Fluxapyroxad	19.1	Spike	P	0 - 34
2326579	Fonofos	3.85	Spike	P	0 - 27
2326579	Hexazinone	7.83	Spike	P	0 - 36
2326579	Imazalil	10.6	Spike	P	0 - 65
2326579	Iprodione	16.1	Spike	P	0 - 33
2326579	Loratadine	17.4	Spike	P	0 - 30
2326579	Malathion	7.42	Spike	P	0 - 44
2326579	Metalaxyl	4.57	Spike	P	0 - 38
2326579	Metolachlor	7.39	Spike	P	0 - 36
2326579	Metribuzin	2.07	Spike	P	0 - 63
2326579	Mevinphos	7.36	Spike	P	0 - 26
2326579	Molinate	9.12	Spike	P	0 - 40
2326579	Myclobutanil	5.48	Spike	P	0 - 21

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P413852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326579	Naled	12.2	Spike	P	0 - 26
2326579	Napropamide	7.62	Spike	P	0 - 30
2326579	Norflurazon	16.6	Spike	P	0 - 24
2326579	Octinoxate	0.0714	Spike	P	0 - 30
2326579	Oxadiazon	7.60	Spike	P	0 - 27
2326579	Oxybenzone	1.10	Spike	P	0 - 30
2326579	Oxyfluorfen	9.19	Spike	P	0 - 24
2326579	Parathion Ethyl	7.76	Spike	P	0 - 28
2326579	Parathion Methyl	6.36	Spike	P	0 - 27
2326579	Pendimethalin	12.2	Spike	P	0 - 31
2326579	Phenytol	2.28	Spike	P	0 - 30
2326579	Phorate	6.07	Spike	P	0 - 27
2326579	Prodiamine	16.5	Spike	P	0 - 52
2326579	Prometon	20.5	Spike	P	0 - 31
2326579	Prometryn	6.75	Spike	P	0 - 28
2326579	Pronamide	6.31	Spike	P	0 - 26
2326579	Propanil	6.21	Spike	P	0 - 30
2326579	Propargite	2.20	Spike	P	0 - 30
2326579	Propiconazole	0.877	Spike	P	0 - 31
2326579	Pyraflufen Ethyl	4.81	Spike	P	0 - 30
2326579	Pyridaben	14.5	Spike	P	0 - 30
2326579	Pyriproxyfen	6.05	Spike	P	0 - 50
2326579	Simazine	3.60	Spike	P	0 - 29
2326579	Stiropfos	10.4	Spike	P	0 - 30
2326579	Sulfentrazone	16.1	Spike	P	0 - 33
2326579	Tebuconazole	0.332	Spike	P	0 - 44
2326579	Terbufos	10.5	Spike	P	0 - 29
2326579	Terbuthylazine	7.12	Spike	P	0 - 27
2326579	Thiobencarb	5.10	Spike	P	0 - 30
2326579	Triadimefon	4.96	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326637	Acesulfame K	0.497	Spike	P	0 - 30
2326637	AMPA	1.37	Spike	P	0 - 30
2326637	Endothall	4.30	Spike	P	0 - 30
2326637	Glufosinate	10.0	Spike	P	0 - 30
2326637	Glyphosate	1.66	Spike	P	0 - 30
2326637	Sucralose	0.531	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326540	2,4-D	0.139	Spike	P	0 - 30
2326540	2,4,5-T	0.624	Spike	P	0 - 30
2326540	Acetaminophen	1.06	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P413908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326540	Acetamiprid	4.42	Spike	P	0 - 30
2326540	Afidopyropen	3.23	Spike	P	0 - 30
2326540	Bentazon	0.156	Spike	P	0 - 30
2326540	Benzovindiflupyr	1.76	Spike	P	0 - 30
2326540	Carbamazepine	0.590	Spike	P	0 - 30
2326540	Clothianidin	4.71	Spike	P	0 - 30
2326540	Dinotefuran	3.84	Spike	P	0 - 30
2326540	Diuron	10.6	Spike	P	0 - 30
2326540	Fenuron	3.39	Spike	P	0 - 30
2326540	Fluridone	1.00	Spike	P	0 - 30
2326540	Hydrocodone	4.08	Spike	P	0 - 30
2326540	Ibuprofen	3.18	Spike	P	0 - 30
2326540	Imazapyr	4.67	Spike	P	0 - 30
2326540	Imidacloprid	4.31	Spike	P	0 - 30
2326540	Linuron	3.82	Spike	P	0 - 30
2326540	Mandestrobin	2.26	Spike	P	0 - 30
2326540	MCPP	0.961	Spike	P	0 - 30
2326540	Naproxen	4.65	Spike	P	0 - 30
2326540	Primidone	8.16	Spike	P	0 - 30
2326540	Pyraclostrobin	5.85	Spike	P	0 - 30
2326540	Silvex	8.68	Spike	P	0 - 30
2326540	Thiamethoxam	3.52	Spike	P	0 - 30
2326540	Tolfenpyrad	6.09	Spike	P	0 - 30
2326540	Triclopyr	6.80	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P414066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327113	Total Alkalinity	0.591	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P414397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326674	TDS	5.46	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P414069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327113	Fluoride	0.490	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P413969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P413969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326583	Organic Carbon	0.507	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2326680
Field Sample ID: G4CE0158

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	48.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.7	P	30 - 160
EPA 8321B	Diuron-d6	65.9	P	30 - 160
EPA 8321B	Endothall-d6	144	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	67.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.8	P	30 - 160
EPA 8321B	Primidone-d5	72.3	P	30 - 160
EPA 8321B	Sucralose-d6	91.0	P	30 - 160

Lab Sample ID: 2326682
Field Sample ID: G4CE0158

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	73.0	P	20 - 200
EPA 8270E	Simazine-d10	76.1	P	71 - 140
EPA 8270E	Terbufos-d10	89.1	P	62 - 131
EPA 8270E	Terphenyl-d14	78.9	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A112101

Included Lab Sample IDs: 2326697

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112103

Included Lab Sample IDs: 2326674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112107

Included Lab Sample IDs: 2326674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A112175

Included Lab Sample IDs: 2326680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.7	71.5	P/P	60 - 160
Endothall	127	114	P/P	60 - 160
Glufosinate	95.0	68.9	P/P	60 - 160
Glyphosate	83.8	78.7	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112188

Included Lab Sample IDs: 2326681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	102	P/P	90 - 110
Antimony	97.6	96.0	P/P	90 - 110
Arsenic	98.2	95.4	P/P	90 - 110
Barium	98.4	97.4	P/P	90 - 110
Beryllium	91.4	90.1	P/P	90 - 110
Boron	103	101	P/P	90 - 110
Cadmium	98.1	96.4	P/P	90 - 110
Chromium	97.1	96.5	P/P	90 - 110
Cobalt	97.7	95.3	P/P	90 - 110
Copper	97.5	94.4	P/P	90 - 110
Lead	96.3	94.9	P/P	90 - 110
Manganese	99.6	98.2	P/P	90 - 110
Molybdenum	97.9	96.6	P/P	90 - 110
Nickel	97.4	95.1	P/P	90 - 110
Selenium	98.1	96.3	P/P	90 - 110
Silver	98.8	96.3	P/P	90 - 110
Thallium	91.7	91.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112196

Included Lab Sample IDs: 2326675

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112198

Included Lab Sample IDs: 2326674

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

Reference Method: SM 5310 B-2011

Run ID: A112207

Included Lab Sample IDs: 2326675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	97.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112212

Included Lab Sample IDs: 2326680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	105	P/P	60 - 160
Sucralose	100	90.7	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112214

Included Lab Sample IDs: 2326681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Magnesium	99.8	102	P/P	90 - 110
Potassium	100	102	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Strontium	99.5	101	P/P	90 - 110
Tin	99.2	98.9	P/P	90 - 110
Titanium	99.5	98.7	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	100	99.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112222

Included Lab Sample IDs: 2326680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.0	96.9	P/P	50 - 150
2,4,5-T	88.6	96.5	P/P	50 - 150
Acetaminophen	101	100	P/P	60 - 160
Acetamiprid	108	111	P/P	50 - 150
Afidopyropen	90.7	96.0	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A112222
Included Lab Sample IDs: 2326680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	92.3	91.9	P/P	50 - 160
Benzovindiflupyr	106	109	P/P	50 - 150
Carbamazepine	103	103	P/P	60 - 150
Clothianidin	103	98.2	P/P	60 - 150
Dinotefuran	103	99.1	P/P	50 - 150
Diuron	98.3	97.0	P/P	60 - 160
Fenuron	96.5	95.8	P/P	60 - 150
Fluridone	100	103	P/P	60 - 160
Hydrocodone	97.5	101	P/P	60 - 150
Ibuprofen	78.0	85.1	P/P	50 - 160
Imazapyr	90.9	88.2	P/P	50 - 150
Imidacloprid	100	91.1	P/P	60 - 150
Linuron	103	101	P/P	60 - 150
Mandestrobin	99.6	101	P/P	50 - 150
MCPP	96.1	93.2	P/P	50 - 150
Naproxen	87.3	106	P/P	50 - 160
Primidone	100	103	P/P	60 - 150
Pyraclostrobin	101	103	P/P	60 - 150
Silvex	91.8	89.2	P/P	50 - 150
Thiamethoxam	104	96.1	P/P	50 - 150
Tolfenpyrad	106	105	P/P	60 - 150
Triclopyr	81.3	91.3	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A112245
Included Lab Sample IDs: 2326674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	97.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A112245
Included Lab Sample IDs: 2326674

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112305
Included Lab Sample IDs: 2326675

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A112360
Included Lab Sample IDs: 2326675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	95.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112419

Included Lab Sample IDs: 2326675

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112489

Included Lab Sample IDs: 2326682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	102		P	80 - 120
Octinoxate	96.5		P	80 - 120
Oxybenzone	96.8		P	80 - 120

Reference Method: EPA 8270E

Run ID: A112507

Included Lab Sample IDs: 2326682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	113		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	107		P	80 - 120
Azinphos Methyl	96.6		P	80 - 120
Azoxystrobin	98.4		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	108		P	80 - 120
Caffeine	98.7		P	80 - 120
Carbophenothion	100		P	80 - 120
Carfentrazone Ethyl	98.1		P	80 - 120
Chlorfenapyr	104		P	80 - 120
Chlorpyrifos Ethyl	104		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Coumaphos	99.1		P	80 - 120
Cyanazine	99.9		P	80 - 120
Cyprodinil	102		P	80 - 120
Demeton	104		P	80 - 120
Diazinon	98.1		P	80 - 120
Difenoconazole	99.9		P	80 - 120
Dimethenamid	103		P	80 - 120
Dimethomorph	99.2		P	80 - 120
Disulfoton	106		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	95.7		P	80 - 120
Ethion	103		P	80 - 120
Ethoprop	102		P	80 - 120
Etridiazole	103		P	80 - 120
Fenamiphos	98.6		P	80 - 120
Fenbuconazole	99.5		P	80 - 120
Fipronil	107		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	99.1		P	80 - 120
Fipronil Sulfone	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A112507
 Included Lab Sample IDs: 2326682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluazifop-P-butyl	102		P	80 - 120
Fludioxonil	100		P	80 - 120
Flumioxazin	97.0		P	80 - 120
Flutolanil	97.8		P	80 - 120
Fluxapyroxad	100		P	80 - 120
Fonofos	91.7		P	80 - 120
Hexazinone	99.7		P	80 - 120
Imazalil	91.5		P	80 - 120
Iprodione	92.5		P	80 - 120
Loratadine	102		P	80 - 120
Malathion	96.1		P	80 - 120
Metalaxyl	104		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	97.6		P	80 - 120
Mevinphos	94.1		P	80 - 120
Molinate	95.8		P	80 - 120
Myclobutanil	109		P	80 - 120
Naled	104		P	80 - 120
Napropamide	101		P	80 - 120
Norflurazon	100		P	80 - 120
Oxadiazon	107		P	80 - 120
Oxyfluorfen	101		P	80 - 120
Parathion Ethyl	99.3		P	80 - 120
Parathion Methyl	97.0		P	80 - 120
Pendimethalin	103		P	80 - 120
Phenytoin	104		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	107		P	80 - 120
Prometon	98.8		P	80 - 120
Prometryn	101		P	80 - 120
Pronamide	97.1		P	80 - 120
Propanil	99.3		P	80 - 120
Propargite	95.3		P	80 - 120
Propiconazole	103		P	80 - 120
Pyraflufen Ethyl	95.6		P	80 - 120
Pyridaben	97.6		P	80 - 120
Pyriproxyfen	96.6		P	80 - 120
Simazine	105		P	80 - 120
Stirophos	103		P	80 - 120
Sulfentrazone	102		P	80 - 120
Tebuconazole	98.8		P	80 - 120
Terbufos	104		P	80 - 120
Terbuthylazine	101		P	80 - 120
Thiobencarb	101		P	80 - 120
Triadimefon	118		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
 Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
 Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	99.5					0.774	
EPA 180.1 Rev. 2.0	Turbidity	96.8					6.23	
EPA 200.7 Rev. 4.4	Calcium	107	106	93.0				1.76
	Iron	108	107	102	102			3.75
	Magnesium	104	105	95.5				3.31
	Potassium	106	112	109	92.8			3.29
	Sodium	110	110	107	94.2			1.29
	Strontium	103	103	101	99.3			1.48
	Tin	106	101	99.6	96.0			1.65
	Titanium	106	103	101	100			2.15
	Vanadium	99.4	99.0	97.2	96.2			1.84
	Zinc	106	99.6	98.4	101			1.24
EPA 200.8 Rev. 5.4	Aluminum	100	100	102	101			1.49
	Antimony	99.3	100	99.4	102			0.901
	Arsenic	98.8	98.1	99.1	101			1.03
	Barium	103	102	101	104			0.508
	Beryllium	94.2	93.3	92.1	92.6			1.35
	Boron	102	103	105	103			1.88
	Cadmium	97.8	99.9	98.8	102			1.07
	Chromium	96.0	97.3	98.5	98.4			1.21
	Cobalt	97.5	96.2	96.0	99.2			0.206
	Copper	96.8	93.3	93.0	96.8			0.272
	Lead	94.0	94.2	93.6	96.2			0.628
	Manganese	98.2	98.7	99.0				0.198
	Molybdenum	98.8	101	102	103			0.203
	Nickel	98.6	95.7	96.1	96.8			0.408
	Selenium	99.4	98.4	99.2	101			0.814
	Silver	98.7	97.4	97.3	95.3			0.0748
	Thallium	95.3	97.8	97.1	99.4			0.664
EPA 300.0 Rev. 2.1	Chloride	100	98.8	99.7			0.0520	
	Sulfate	99.0	96.5	97.4			0.0441	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	94.4	93.6				0.709
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.3	102	109				4.89
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	96.2	95.2				0.948
EPA 365.1 Rev. 2.0	Total-P	101	101	105				3.14
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1	93.6	93.6				0.0
EPA 8270E	Acetochlor	110	104	114				8.74
	Alachlor	99.9	94.6	98.4				3.98
	Ametryn	135	117	106				6.43
	Atrazine	94.7						11.3
	Atrazine Desethyl	67.3						5.49
	Avobenzone	116	116	111				3.81
	Azinphos Methyl	142	177	173				2.44
	Azoxystrobin	105	107	126				8.66
	Bromacil	79.8	90.9	98.2				7.78
	Butylate	61.7	51.0	50.6				0.738
	Caffeine	82.0	98.4	94.2				4.20
	Carbophenothion	96.5	89.0	103				14.7
	Carfentrazone Ethyl	124	117	121				2.89
	Chlorfenapyr	85.1	78.0	88.4				12.5
	Chlorpyrifos Ethyl	88.9	83.0	95.7				14.2
	Chlorpyrifos Methyl	95.4	83.8	97.2				14.8
	Coumaphos	171	156	171				9.27
	Cyanazine	194	185	197				6.52

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Cyprodinil	139	130	139		6.61
	Demeton	86.1	85.9	88.8		3.33
	Diazinon	116	112	118		5.56
	Difenoconazole	183	181	224		21.4
	Dimethenamid	88.1	86.8	91.5		5.23
	Dimethomorph	116	97.1	114		16.3
	Disulfoton	99.2	84.8	102		18.4
	Dithiopyr	99.2	98.6	105		6.25
	EPTC	63.4	55.0	58.6		6.30
	Ethion	72.9	76.9	86.3		11.6
	Ethoprop	104	104	114		9.20
	Etridiazole	69.4	62.1	61.1		1.50
	Fenamiphos	104	86.8	105		18.5
	Fenbuconazole	74.6	146	156		6.13
	Fipronil	121	119	126		5.54
	Fipronil Desulfinyl	108	105	111		4.07
	Fipronil Sulfide	84.4	80.9	93.2		11.1
	Fipronil Sulfone	100				6.31
	Fluazifop-P-butyl	107	108	115		5.55
	Fludioxonil	123	120	130		8.40
	Flumioxazin	162	196	205		4.55
	Flutolanil	111	105	111		5.73
	Fluxapyroxad	64.2	64.9	79.6		19.1
	Fonofos	88.5	89.3	86.0		3.85
	Hexazinone	96.3	100	108		7.83
	Imazalil	93.2	78.1	86.9		10.6
	Iprodione	82.3	75.6	88.8		16.1
	Loratadine	113	96.5	115		17.4
	Malathion	96.8	103	111		7.42
	Metalaxyl	93.5	88.9	93.0		4.57
	Metolachlor	101	96.2	104		7.39
	Metribuzin	89.0	91.2	89.3		2.07
	Mevinphos	88.3	87.2	93.9		7.36
	Molinate	76.7	70.9	77.7		9.12
	Myclobutanil	73.7	82.1	87.4		5.48
	Naled	78.5	80.9	91.5		12.2
	Napropamide	89.2	84.8	91.5		7.62
	Norflurazon	72.4	64.3	75.9		16.6
	Octinoxate	82.2	79.4	79.5		0.0714
	Oxadiazon	91.5	81.9	89.5		7.60
	Oxybenzone	78.3	80.9	80.0		1.10
	Oxyfluorfen	109	123	135		9.19
	Parathion Ethyl	99.6	93.2	101		7.76
	Parathion Methyl	113	109	116		6.36
	Pendimethalin	58.8	90.2	102		12.2
	Phenytoin	20.8	75.4	73.7		2.28
	Phorate	94.7	77.6	82.5		6.07
	Prodiamine	75.6	114	134		16.5
	Prometon	72.5	112	137		20.5
	Prometryn	127	124	133		6.75
	Pronamide	104	105	111		6.31
	Propanil	87.2	86.5	92.0		6.21
	Propargite	139	145	148		2.20
	Propiconazole	75.4	136	138		0.877

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Pyraflufen Ethyl	133	129	136			4.81
	Pyridaben	142					14.5
	Pyriproxyfen	122	139	148			6.05
	Simazine	90.9					3.60
	Stirophos	84.6	84.7	94.0			10.4
	Sulfentrazone	43.6	128	105			16.1
	Tebuconazole	20.7	40.7	40.6			0.332
	Terbufos	122	115	128			10.5
	Terbuthylazine	92.7	95.6	103			7.12
	Thiobencarb	94.0	93.2	98.1			5.10
	Triadimefon	92.7	89.3	94.6			4.96
EPA 8321B	2,4-D	68.8	75.8	75.9			0.139
	2,4,5-T	52.3	59.0	59.4			0.624
	Acesulfame K	98.9	101	101			0.497
	Acetaminophen	59.2	51.6	51.1			1.06
	Acetamiprid	93.4	96.7	101			4.42
	Afidopyropen	65.2	81.6	79.0			3.23
	AMPA	50.1	49.0	49.7			1.37
	Bentazon	98.3	99.5	99.3			0.156
	Benzovindiflupyr	95.3	88.2	86.7			1.76
	Carbamazepine	88.3	89.4	88.9			0.590
	Clothianidin	95.5	65.8	69.0			4.71
	Dinotefuran	93.7	92.8	96.4			3.84
	Diuron	84.1	78.0	86.7			10.6
	Endothall	108	175	183			4.30
	Fenuron	104	90.9	94.0			3.39
	Fluridone	82.2	80.9	81.7			1.00
	Glufosinate	75.2	68.1	61.6			10.0
	Glyphosate	65.2	56.7	57.7			1.66
	Hydrocodone	93.0	85.6	89.2			4.08
	Ibuprofen	59.1	59.9	61.9			3.18
	Imazapyr	86.2	73.6	77.6			4.67
	Imidacloprid	93.4	79.7	83.2			4.31
	Linuron	78.6	71.3	68.7			3.82
	Mandestrobin	80.7	76.6	78.4			2.26
	MCPP	73.2	77.1	77.9			0.961
	Naproxen	62.2	65.7	62.7			4.65
	Primidone	85.3	68.7	74.5			8.16
	Pyraclostrobin	79.1	72.9	77.3			5.85
	Silvex	44.1	58.4	53.6			8.68
	Sucralose	87.5	97.7	97.1			0.531
	Thiamethoxam	98.0	83.6	86.6			3.52
	Tolfenpyrad	52.2	44.0	46.8			6.09
	Triclopyr	51.7	63.2	59.0			6.80
SM 2320 B-2011	Total Alkalinity	99.6				0.591	
SM 2540 C-2011	TDS					5.46	
SM 4500-F- C-2011	Fluoride	99.4	106	107			0.490
SM 5310 B-2011	Organic Carbon	99.6	97.5	98.2			0.507

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2326674

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2326674
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2326681
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2326681
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2326674
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2326674
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2326675
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2326675
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2326675
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2326675
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2326697
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2326682
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2326682
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2326680
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2326674
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2326681
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2326674
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2326674
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2326674
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2326675

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	05/12/2022			05/12/2022 14:13	Anna M. Plaviak	2326674
EPA 180.1 Rev. 2.0	05/12/2022			05/12/2022 13:25	Khloe J Berg	2326674
EPA 200.7 Rev. 4.4	05/12/2022	05/13/2022 10:25	Megan Whitefoot	05/17/2022 21:07	McKinley C Carter	2326681
EPA 200.8 Rev. 5.4	05/12/2022	05/13/2022 10:25	Megan Whitefoot	05/16/2022 18:43	Emily M Philpot	2326681
EPA 300.0 Rev. 2.1	05/12/2022			05/19/2022 04:08	Anna M. Plaviak	2326674
EPA 350.1 Rev. 2.0	05/12/2022			05/24/2022 13:29	Ping Hua	2326675
EPA 351.2 Rev. 2.0	05/12/2022	05/25/2022 11:36	Samantha L Bates	05/25/2022 13:40	Alexandra J Mattheus	2326675
EPA 353.2 Rev. 2.0	05/12/2022			05/17/2022 11:28	Beverly Y. Sanders	2326675
EPA 365.1 Rev. 2.0	05/12/2022	05/19/2022 14:04	Simonne.V. Calhoun	05/20/2022 12:45	Sarah A Nixon	2326675
EPA 365.1 Rev. 2.0 dissolved	05/12/2022			05/12/2022 13:39	James L Waggeberby	2326697
EPA 8270E	05/12/2022	05/17/2022 08:00	Fe-Val Siddell	05/18/2022 22:18	Vandana T. Nagar	2326682
	05/12/2022	05/17/2022 08:00	Fe-Val Siddell	05/26/2022 18:08	Lipi Saha	2326682
EPA 8321B	05/12/2022	05/16/2022 09:30	Manjita Shrestha	05/16/2022 13:05	Manjita Shrestha	2326680
	05/12/2022	05/16/2022 09:30	Manjita Shrestha	05/16/2022 15:45	Manjita Shrestha	2326680
	05/12/2022	05/16/2022 09:30	Manjita Shrestha	05/17/2022 17:40	Manjita Shrestha	2326680
	05/12/2022	05/17/2022 09:30	June Rhew	05/19/2022 07:02	Juyoung Kim	2326680
SM 2320 B-2011	05/12/2022			05/18/2022 20:08	Dale L. Simmons	2326674
SM 2340 B-2011	05/12/2022			05/17/2022 21:07	McKinley C Carter	2326681
SM 2540 C-2011	05/12/2022			05/18/2022 09:59	Yijie Li	2326674
SM 2540 D-2011	05/12/2022			05/18/2022 09:59	Yijie Li	2326674
SM 4500-F- C-2011	05/12/2022			05/18/2022 20:08	Dale L. Simmons	2326674
SM 5310 B-2011	05/12/2022			05/16/2022 22:35	Khloe J Berg	2326675