

Chemical Analysis Report

NW-DIST-2022-02-22-01

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

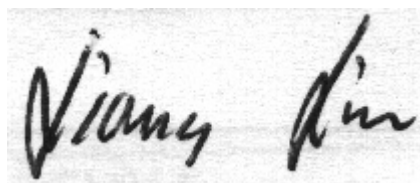
Event Description: **Laurel Hill East**
Request ID: **RQ-2022-01-17-36**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 16-MAR-2022 14:34

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: Gum Creek

Collection Date/Time: 02/21/2022 10:00

Field ID: G4NW0382

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307140	DEP SOP: NU-094-1	Color (true)**	29	A	PCU	P410196	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P410202	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P410361	
		Sulfate	0.88		mg SO4/L	P410366	
	SM 2320 B-2011	Total Alkalinity	1.8	I	mg CaCO3/L	P410562	
	SM 2540 C-2011	TDS	23	I	mg/L	P410637	
	SM 2540 D-2011	TSS	3	I	mg/L	P410499	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P410567	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P410573	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P410219	
2307141	EPA 353.2 Rev. 2.0	NO2NO3-N	0.60		mg N/L	P410544	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P410215	
	SM 5310 B-2011	Organic Carbon	2.9		mg C/L	P410540	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P410206	
	dissolved						
2307156	EPA 8321B	Aldicarb	0.020	U	ug/L	P410330	
		Aldicarb Sulfone	0.0020	U	ug/L	P410330	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P410330	
		Carbaryl	0.0020	U	ug/L	P410330	
		Carbofuran	0.0020	U	ug/L	P410330	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P410330	
		Methiocarb	0.0020	U	ug/L	P410330	
		Methomyl	0.0020	U	ug/L	P410330	
		Oxamyl	0.0020	U	ug/L	P410330	
		Propoxur	0.0020	U	ug/L	P410330	
2307157		2,4-D	0.0020	U	ug/L	P410241	
		Acesulfame K	0.10	U	ug/L	P410177	
		2,4,5-T	0.0040	U	ug/L	P410241	
		AMPA	0.10	U	ug/L	P410177	
		Acetaminophen	0.0080	U	ug/L	P410241	
		Acetamiprid	0.0020	U	ug/L	P410241	
		Endothall	0.25	U	ug/L	P410177	
		Glufosinate	0.10	U	ug/L	P410177	
		Glyphosate	0.10	U	ug/L	P410177	
		Afidopyropen	0.0020	U	ug/L	P410241	
		Bentazon	8.0E-04	U	ug/L	P410241	
		Sucralose	0.098		ug/L	P410177	
		Benzovindiflupyr	0.0020	U	ug/L	P410241	
		Carbamazepine	8.0E-04	U	ug/L	P410241	
		Clothianidin	0.0020	U	ug/L	P410241	
		Dinotefuran	0.0020	U	ug/L	P410241	
		Diuron	0.0020	U	ug/L	P410241	
		Fenuron	0.016	U	ug/L	P410241	
		Fluridone	8.0E-04	U	ug/L	P410241	

Field ID: G4NW0382

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307157	EPA 8321B	Imazapyr	0.021		ug/L	P410241	
		Hydrocodone	0.0020	U	ug/L	P410241	
		Ibuprofen	0.020	U	ug/L	P410241	
		Imidacloprid	0.0057	I	ug/L	P410241	MS
		Linuron	0.0040	U	ug/L	P410241	
		Mandestrobin	0.0020	U	ug/L	P410241	
		MCPP	0.0020	U	ug/L	P410241	
		Naproxen	0.0080	U	ug/L	P410241	
		Primidone	0.0040	U	ug/L	P410241	
		Pyraclostrobin	0.0020	U	ug/L	P410241	
		Silvex	0.0040	U	ug/L	P410241	
		Thiamethoxam	0.0020	U	ug/L	P410241	MS
		Tolfenpyrad	0.0020	U	ug/L	P410241	
		Triclopyr	0.0040	U	ug/L	P410241	
2307159	EPA 8270E	Aldrin	0.70	U	ng/L	P410111	
		Alpha-BHC	0.11	U	ng/L	P410111	
		Alpha-Chlordane	0.22	U	ng/L	P410111	
		Beta-BHC	0.11	U	ng/L	P410111	MS
		Beta-Cyfluthrin**	1.4	U	ng/L	P410111	
		Bifenthrin**	0.54	U	ng/L	P410111	
		Chlorothalonil	1.4	U	ng/L	P410111	MS, RPD
		Cis-Nonachlor**	0.22	U	ng/L	P410111	
		Cypermethrin	1.6	U	ng/L	P410111	
		Dacthal**	0.16	U	ng/L	P410111	
		DDD-p,p'	0.27	U	ng/L	P410111	
		DDE-p,p'	0.22	U	ng/L	P410111	
		DDT-p,p'	0.27	UJ	ng/L	P410111	LCS, MS
		Delta-BHC	0.43	U	ng/L	P410111	
		Deltamethrin**	1.4	U	ng/L	P410111	
		Dichlobenil**	0.27	U	ng/L	P410111	
		Dicofol	1.4	UJ	ng/L	P410111	LCS, MS, RPD
		Dieldrin	0.43	U	ng/L	P410111	
		Endosulfan I	0.43	U	ng/L	P410111	
		Endosulfan II	0.43	U	ng/L	P410111	
		Endosulfan Sulfate	0.32	U	ng/L	P410111	
		Endrin	0.43	U	ng/L	P410111	
		Endrin Aldehyde	0.81	U	ng/L	P410111	
		Endrin Ketone	0.43	U	ng/L	P410111	
		Esfenvalerate**	0.81	U	ng/L	P410111	
		Ethalfuralin**	0.16	U	ng/L	P410111	
		Fenpropathrin**	0.27	U	ng/L	P410111	
		Gamma-BHC	0.14	U	ng/L	P410111	
		Gamma-Chlordane	0.22	U	ng/L	P410111	
		Heptachlor	0.22	U	ng/L	P410111	

Field ID: G4NW0382

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307159	EPA 8270E	Heptachlor Epoxide	0.27	U	ng/L	P410111	
		Hexachlorobenzene	1.1	U	ng/L	P410111	
		Kepone**	5.4	U	ng/L	P410111	
		Lambda-Cyhalothrin**	0.81	U	ng/L	P410111	
		Methoprene**	0.81	U	ng/L	P410111	
		Methoxychlor	0.32	U	ng/L	P410111	
		MGK-264**	0.22	U	ng/L	P410111	
		Mirex	0.76	U	ng/L	P410111	
		Oxychlorthane**	0.32	U	ng/L	P410111	
		Permethrin	1.7	U	ng/L	P410111	
		Phenothrin**	0.97	U	ng/L	P410111	
		Piperonyl Butoxide**	0.16	U	ng/L	P410111	
		Prallethrin**	2.2	U	ng/L	P410111	
		Tau-Fluvalinate**	0.27	U	ng/L	P410111	
		Tetramethrin**	0.81	U	ng/L	P410111	
		Trans-Nonachlor**	0.22	U	ng/L	P410111	
		Triclosan Methyl**	0.16	U	ng/L	P410111	
		Trifluralin	0.22	U	ng/L	P410111	
		Chlordane	2.7	U	ng/L	P410111	
		Toxaphene	16	U	ng/L	P410111	
2307160	EPA 8270E	Acetochlor	0.25	U	ng/L	P410273	
		Alachlor	0.25	U	ng/L	P410273	
		Ametryn	0.61	U	ng/L	P410273	
		Atrazine	0.25	U	ng/L	P410273	
		Atrazine Desethyl	1.5	U	ng/L	P410273	
		Azinphos Methyl	2.0	U	ng/L	P410273	
		Azoxystrobin**	0.51	U	ng/L	P410273	
		Bromacil	0.51	U	ng/L	P410273	
		Butylate	0.40	U	ng/L	P410273	
		Caffeine**	7.6	U	ng/L	P410273	
		Carbophenothion	2.5	U	ng/L	P410273	
		Carfentrazone Ethyl**	0.10	U	ng/L	P410273	
		Chlorfenapyr**	0.18	U	ng/L	P410273	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P410273	
		Chlorpyrifos Methyl	0.051	U	ng/L	P410273	
		Coumaphos**	0.51	U	ng/L	P410273	
		Cyanazine	3.3	U	ng/L	P410273	
		Cyprodinil**	0.10	U	ng/L	P410273	
		Demeton	1.5	U	ng/L	P410273	
		Diazinon	0.13	U	ng/L	P410273	
		Difenoconazole**	0.61	U	ng/L	P410273	
		Dimethenamid**	0.10	U	ng/L	P410273	
		Dimethomorph**	0.18	U	ng/L	P410273	MS
		Disulfoton	0.51	U	ng/L	P410273	
		Dithiopyr**	0.18	U	ng/L	P410273	

Field ID: G4NW0382

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307160	EPA 8270E	EPTC	1.3	U	ng/L	P410273	
		Ethion	0.15	U	ng/L	P410273	
		Ethoprop	0.10	U	ng/L	P410273	
		Etridiazole**	0.15	U	ng/L	P410273	
		Fenamiphos	0.51	U	ng/L	P410273	
		Fenbuconazole**	0.13	U	ng/L	P410273	
		Fipronil	0.25	U	ng/L	P410273	
		Fipronil Desulfinyl**	0.13	U	ng/L	P410273	
		Fipronil Sulfide	0.15	U	ng/L	P410273	
		Fipronil Sulfone	0.15	U	ng/L	P410273	
		Fluazifop-P-butyl**	0.10	U	ng/L	P410273	
		Fludioxonil**	0.13	U	ng/L	P410273	
		Flumioxazin**	1.8	U	ng/L	P410273	
		Flutolanil**	0.10	U	ng/L	P410273	
		Fluxapyroxad**	0.10	U	ng/L	P410273	
		Fonofos	0.20	U	ng/L	P410273	
		Hexazinone	0.51	U	ng/L	P410273	
		Imazalil**	0.76	U	ng/L	P410273	
		Iprodione**	0.61	U	ng/L	P410273	
		Loratadine**	0.10	U	ng/L	P410273	
		Malathion	0.35	U	ng/L	P410273	
		Metalaxyl	0.76	U	ng/L	P410273	
		Metolachlor	1.4	I	ng/L	P410273	
		Metribuzin	2.5	U	ng/L	P410273	
		Mevinphos	1.1	U	ng/L	P410273	
		Molinate	0.30	U	ng/L	P410273	
		Myclobutanil**	0.25	U	ng/L	P410273	
		Naled**	1.5	U	ng/L	P410273	
		Napropamide**	0.40	U	ng/L	P410273	
		Norflurazon	0.51	U	ng/L	P410273	
		Oxadiazon	0.30	U	ng/L	P410273	
		Oxyfluorfen**	0.15	U	ng/L	P410273	
		Parathion Ethyl	0.25	U	ng/L	P410273	
		Parathion Methyl	0.56	U	ng/L	P410273	
		Pendimethalin	1.0	U	ng/L	P410273	
		Phenytoin**	3.5	U	ng/L	P410273	MS, RPD
		Phorate	0.53	U	ng/L	P410273	
		Prodiamine**	0.30	U	ng/L	P410273	
		Prometon	0.91	U	ng/L	P410273	
		Prometryn	0.20	U	ng/L	P410273	
		Pronamide**	0.15	U	ng/L	P410273	
		Propanil**	0.13	U	ng/L	P410273	
		Propargite**	1.5	U	ng/L	P410273	
		Propiconazole**	0.51	U	ng/L	P410273	
		Pyraflufen Ethyl**	0.25	U	ng/L	P410273	

Field ID: G4NW0382

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307160	EPA 8270E	Pyridaben**	0.45	U	ng/L	P410273	
		Pyriproxyfen**	0.13	U	ng/L	P410273	
		Simazine	0.51	U	ng/L	P410273	
		Stirophos**	0.13	U	ng/L	P410273	
		Sulfentrazone**	0.51	U	ng/L	P410273	
		Tebuconazole**	0.51	U	ng/L	P410273	
		Terbufos	0.10	U	ng/L	P410273	
		Terbuthylazine	0.43	U	ng/L	P410273	
		Thiobencarb**	0.61	U	ng/L	P410273	
		Triadimefon**	0.25	U	ng/L	P410273	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8270E: MS accuracy for Sulfentrazone not assessed due to high content of this parameter in the sample spiked.

Sample Location: Titi Creek above SR 285

Collection Date/Time: 02/21/2022 09:20

Field ID: G4NW0365

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307158	EPA 8321B	2,4-D	0.0020	U	ug/L	P410241	
		Acesulfame K	0.10	U	ug/L	P410177	
		2,4,5-T	0.0040	U	ug/L	P410241	
		AMPA	0.10	U	ug/L	P410177	
		Acetaminophen	0.0080	U	ug/L	P410241	
		Acetamiprid	0.0020	U	ug/L	P410241	
		Endothall	0.25	U	ug/L	P410177	
		Glufosinate	0.10	U	ug/L	P410177	
		Glyphosate	0.10	U	ug/L	P410177	
		Afidopyropen	0.0020	U	ug/L	P410241	
		Bentazon	8.0E-04	U	ug/L	P410241	
		Sucralose	0.12		ug/L	P410177	
		Benzovindiflupyr	0.0020	U	ug/L	P410241	
		Carbamazepine	8.0E-04	U	ug/L	P410241	
		Clothianidin	0.0020	U	ug/L	P410241	
		Dinotefuran	0.0020	U	ug/L	P410241	
		Diuron	0.0020	U	ug/L	P410241	
		Fenuron	0.016	U	ug/L	P410241	
		Fluridone	8.0E-04	U	ug/L	P410241	
		Imazapyr	0.0040	U	ug/L	P410241	
		Hydrocodone	0.0020	U	ug/L	P410241	
		Ibuprofen	0.020	U	ug/L	P410241	
		Imidacloprid	0.0020	U	ug/L	P410241	MS
		Linuron	0.0040	U	ug/L	P410241	
		Mandestrobin	0.0020	U	ug/L	P410241	
		MCPP	0.0020	U	ug/L	P410241	
		Naproxen	0.0080	U	ug/L	P410241	
		Primidone	0.0040	U	ug/L	P410241	
		Pyraclostrobin	0.0020	U	ug/L	P410241	
		Silvex	0.0040	U	ug/L	P410241	
		Thiamethoxam	0.0020	U	ug/L	P410241	MS
		Tolfenpyrad	0.0020	U	ug/L	P410241	
		Triclopyr	0.0040	U	ug/L	P410241	
2307161	EPA 200.7 Rev. 4.4	Calcium	0.63		mg/L	P410276	
		Iron	90	I	ug/L	P410276	
		Magnesium	0.29		mg/L	P410276	
		Potassium	0.31	I	mg/L	P410276	
		Sodium	1.7	I	mg/L	P410276	
		Strontium	3.3	I	ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	0.77	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Aluminum	76		ug/L	P410276	

Field ID: G4NW0365

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307161	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.050	U	ug/L	P410276	
		Barium	4.11		ug/L	P410276	
		Beryllium	0.010	U	ug/L	P410276	
		Boron**	9.4		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.058	I	ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	3.09		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	2.8		mg/L	P410276	

Ref. Method and Comment:

EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: East Branch Pine Log Creek above Bear Bay Flats Road

Collection Date/Time: 02/21/2022 11:15

Field ID: G4NW0208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307143	DEP SOP: NU-094-1	Color (true)**	63		PCU	P410196	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P410202	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P410361	
		Sulfate	0.79		mg SO4/L	P410366	
	SM 2320 B-2011	Total Alkalinity	6.1		mg CaCO3/L	P410564	
	SM 2540 C-2011	TDS	35		mg/L	P410637	
	SM 2540 D-2011	TSS	2	U	mg/L	P410499	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P410569	
2307144	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P410573	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P410219	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P410544	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P410215	
	SM 5310 B-2011	Organic Carbon	8.9		mg C/L	P410540	
2307145	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410206	

Ref. Method and Comment:

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

Sample Location: Horsehead Creek upstream of Millside Rd

Collection Date/Time: 02/21/2022 12:20

Field ID: G4NW0515

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307162	EPA 200.7 Rev. 4.4	Calcium	2.60		mg/L	P410276	
		Iron	610		ug/L	P410276	
		Magnesium	1.10		mg/L	P410276	
		Potassium	0.60	I	mg/L	P410276	
		Sodium	2.3		mg/L	P410276	
		Strontium	16.1		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	1.0	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P410276	
		Aluminum	92		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.29		ug/L	P410276	
		Barium	22.6		ug/L	P410276	
		Beryllium	0.017	I	ug/L	P410276	
		Boron**	8.2		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.136		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	26.2		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	11.0		mg/L	P410276	

Sample Location: Horsehead Creek

Collection Date/Time: 02/21/2022 12:45

Field ID: G4NW0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307163	EPA 200.7 Rev. 4.4	Calcium	2.88		mg/L	P410276	
		Iron	670		ug/L	P410276	
		Magnesium	0.94		mg/L	P410276	
		Potassium	0.65	I	mg/L	P410276	
		Sodium	2.5		mg/L	P410276	
		Strontium	10.4		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	0.95	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P410276	
		Aluminum	94		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.29		ug/L	P410276	
		Barium	14.5		ug/L	P410276	
		Beryllium	0.010	U	ug/L	P410276	
		Boron**	7.9	I	ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.088		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	18.5		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	11.1		mg/L	P410276	

Sample Location: Pond Creek upstream of Steele Mill Creek Rd Collection Date/Time: 02/21/2022 11:40

Field ID: G4NW0062

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307164	EPA 200.7 Rev. 4.4	Calcium	3.56		mg/L	P410276	
		Iron	770		ug/L	P410276	
		Magnesium	1.39		mg/L	P410276	
		Potassium	0.88	I	mg/L	P410276	
		Sodium	2.4		mg/L	P410276	
		Strontium	13.0		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	0.91	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
		Zinc	5.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Aluminum	85		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.37		ug/L	P410276	
		Barium	20.6		ug/L	P410276	
		Beryllium	0.010	U	ug/L	P410276	
		Boron**	10.7		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.090		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	U	ug/L	P410276	
		Manganese	28.9		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	14.6		mg/L	P410276	

Sample Location: Pond Creek upstream of Bob Sikes Hwy

Collection Date/Time: 02/21/2022 12:00

Field ID: G4NW0522

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2307165	EPA 200.7 Rev. 4.4	Calcium	5.23		mg/L	P410276	
		Iron	940		ug/L	P410276	
		Magnesium	1.73		mg/L	P410276	
		Potassium	1.1	I	mg/L	P410276	
		Sodium	3.1		mg/L	P410276	
		Strontium	15.7		ug/L	P410276	
		Tin	3.0	U	ug/L	P410276	
		Titanium	0.99	I	ug/L	P410276	
		Vanadium	2.0	U	ug/L	P410276	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P410276	
		Aluminum	83		ug/L	P410276	
		Antimony	0.050	U	ug/L	P410276	
		Arsenic	0.56		ug/L	P410276	
		Barium	16.7		ug/L	P410276	
		Beryllium	0.010	I	ug/L	P410276	
		Boron**	13.4		ug/L	P410276	
		Cadmium	0.020	U	ug/L	P410276	
		Chromium	0.40	U	ug/L	P410276	
		Cobalt	0.088		ug/L	P410276	
		Copper	0.40	U	ug/L	P410276	
		Lead	0.20	I	ug/L	P410276	
		Manganese	42.7		ug/L	P410276	
		Molybdenum	0.15	U	ug/L	P410276	
		Nickel	0.50	U	ug/L	P410276	
		Selenium	0.20	U	ug/L	P410276	
		Silver	0.010	U	ug/L	P410276	
		Thallium	0.10	U	ug/L	P410276	
	SM 2340B	Hardness	20.2		mg/L	P410276	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P410196

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

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: P410276

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: P410361

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: P410366

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410544

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410206

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

Reference Method: EPA 8270E
Batch ID: P410111

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410111

Component	Result	Code	Units
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410111

Component	Result	Code	Units
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8270E

Batch ID: P410273

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

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410273

Component	Result	Code	Units
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
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

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410273

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

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410273

Component	Result	Code	Units
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
Stiophos	0.12	U	ng/L
Stiophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8276

Batch ID: P410111

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P410177

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P410177

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: P410241

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
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: P410330

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P410562

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

Reference Method: SM 2320 B-2011
Batch ID: P410564

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

Reference Method: SM 2540 C-2011
Batch ID: P410637

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P410499

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P410567

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P410569

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P410540

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: P410196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	106		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	104		P	85 - 115
Sodium	99.8		P	85 - 115
Strontium	99.3		P	85 - 115
Tin	101		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	93.6		P	85 - 115
Zinc	98.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.5		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	102		P	85 - 115
Barium	103		P	85 - 115
Beryllium	101		P	85 - 115
Boron	99.3		P	85 - 115
Cadmium	97.5		P	85 - 115
Chromium	97.4		P	85 - 115
Cobalt	98.1		P	85 - 115
Copper	98.0		P	85 - 115
Lead	99.5		P	85 - 115
Manganese	96.9		P	85 - 115
Molybdenum	99.3		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	99.1		P	85 - 115
Silver	103		P	85 - 115
Thallium	98.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410361

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.6		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410366

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410544

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410206

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

Reference Method: EPA 8270E
Batch ID: P410111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	61.4		P	10 - 93.0
Alpha-BHC	92.2		P	75 - 106
Alpha-Chlordane	83.3		P	50 - 109
Beta-BHC	106		P	65 - 135
Beta-Cyfluthrin	94.2		P	23 - 167
Bifenthrin	73.8		P	11 - 123
Chlorothalonil	106		P	26 - 182
Cis-Nonachlor	72.2		P	40 - 111
Cypermethrin	102		P	25 - 155
Dacthal	89.3		P	73 - 112
DDD-p,p'	60.3		P	47 - 108
DDE-p,p'	87.7		P	48 - 107
DDT-p,p'	120		F	49 - 111
Delta-BHC	104		P	68 - 143
Deltamethrin	83.9		P	16 - 176
Dichlobenil	91.2		P	32 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P410111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	34.0		F	50 - 108
Dieldrin	85.0		P	56 - 110
Endosulfan I	87.3		P	60 - 105
Endosulfan II	73.4		P	50 - 120
Endosulfan Sulfate	79.8		P	55 - 121
Endrin	71.0		P	31 - 119
Endrin Aldehyde	61.2		P	36 - 116
Endrin Ketone	88.4		P	56 - 130
Esfenvalerate	84.2		P	10 - 179
Ethalfuralin	85.5		P	49 - 99.0
Fenpropathrin	81.3		P	35 - 119
Gamma-BHC	99.2		P	72 - 115
Gamma-Chlordane	84.4		P	45 - 107
Heptachlor	75.7		P	41 - 100
Heptachlor Epoxide	94.3		P	58 - 106
Hexachlorobenzene	69.1		P	39 - 100
Kepone	74.2		P	10 - 191
Lambda-Cyhalothrin	88.2		P	10 - 186
Methoprene	80.3		P	10 - 129
Methoxychlor	86.1		P	61 - 111
MGK-264	87.3		P	20 - 123
Mirex	65.0		P	10 - 182
Oxychlordane	79.8		P	39 - 110
Permethrin	100		P	26 - 152
Phenothrin	73.8		P	10 - 109
Piperonyl Butoxide	97.4		P	27 - 142
Prallethrin	82.7		P	14 - 109
Tau-Fluvalinate	73.3		P	16 - 134
Tetramethrin	85.7		P	10 - 125
Trans-Nonachlor	91.0		P	45 - 107
Triclosan Methyl	86.8		P	60 - 110
Trifluralin	80.2		P	49 - 98.0

Reference Method: EPA 8270E

Batch ID: P410273

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.2		P	70 - 121
Alachlor	83.5		P	68 - 119
Ametryn	100		P	64 - 139
Atrazine	87.8		P	76 - 120
Atrazine Desethyl	63.7		P	44 - 126
Azinphos Methyl	112		P	43 - 192
Azoxystrobin	106		P	36 - 224
Bromacil	84.8		P	52 - 121
Butylate	50.1		P	28 - 91.0
Caffeine	79.9		P	50 - 134
Carbophenothion	99.3		P	56 - 129
Carfentrazone Ethyl	96.9		P	60 - 141
Chlorfenapyr	94.6		P	56 - 115
Chlorpyrifos Ethyl	85.3		P	60 - 118
Chlorpyrifos Methyl	92.8		P	68 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P410273

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Coumaphos	85.4		P	18 - 250
Cyanazine	88.9		P	61 - 250
Cyprodinil	107		P	55 - 145
Demeton	99.9		P	30 - 159
Diazinon	90.2		P	70 - 123
Difenoconazole	87.2		P	49 - 204
Dimethenamid	75.1		P	64 - 115
Dimethomorph	178		P	12 - 219
Disulfoton	85.0		P	44 - 125
Dithiopyr	72.5		P	64 - 115
EPTC	48.6		P	28 - 86.0
Ethion	64.5		P	33 - 125
Ethoprop	80.9		P	64 - 116
Etridiazole	51.5		P	34 - 91.0
Fenamiphos	86.7		P	12 - 127
Fenbuconazole	78.6		P	59 - 151
Fipronil	95.2		P	67 - 129
Fipronil Desulfinyl	101		P	65 - 127
Fipronil Sulfide	86.6		P	61 - 116
Fipronil Sulfone	70.7		P	55 - 117
Fluazifop-P-butyl	90.0		P	62 - 127
Fludioxonil	82.0		P	62 - 128
Flumioxazin	73.0		P	33 - 250
Flutolanil	92.5		P	56 - 127
Fluxapyroxad	70.5		P	45 - 128
Fonofos	78.8		P	62 - 111
Hexazinone	83.7		P	46 - 139
Imazalil	76.1		P	38 - 142
Iprodione	82.8		P	47 - 135
Loratadine	160		P	10 - 244
Malathion	84.8		P	61 - 139
Metalaxyl	83.0		P	10 - 119
Metolachlor	81.5		P	65 - 118
Metribuzin	94.4		P	51 - 250
Mevinphos	81.7		P	53 - 121
Molinate	54.7		P	42 - 96.0
Myclobutanil	89.5		P	55 - 128
Naled	64.7		P	10 - 98.0
Napropamide	82.0		P	49 - 121
Norflurazon	81.9		P	61 - 126
Oxadiazon	70.8		P	59 - 116
Oxyfluorfen	103		P	64 - 137
Parathion Ethyl	87.0		P	70 - 112
Parathion Methyl	113		P	76 - 133
Pendimethalin	96.9		P	52 - 117
Phenytol	29.5		P	10 - 199
Phorate	72.1		P	48 - 121
Prodiamine	62.9		P	26 - 142
Prometon	91.7		P	43 - 123
Prometryn	93.9		P	66 - 127
Pronamide	92.3		P	75 - 121
Propanil	118		P	45 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P410273

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propargite	66.9		P	42 - 208
Propiconazole	85.6		P	60 - 125
Pyraflufen Ethyl	83.2		P	70 - 138
Pyridaben	90.3		P	35 - 245
Pyriproxyfen	83.3		P	30 - 149
Simazine	91.9		P	72 - 125
Stirophos	66.6		P	29 - 164
Sulfentrazone	73.4		P	21 - 139
Tebuconazole	55.5		P	10 - 115
Terbufos	97.5		P	60 - 123
Terbuthylazine	85.3		P	72 - 115
Thiobencarb	80.8		P	31 - 139
Triadimefon	83.9		P	65 - 116

Reference Method: EPA 8276

Batch ID: P410111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.8		P	61 - 118
Toxaphene	75.2		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P410177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	88.0		P	40 - 150
Endothall	95.0		P	40 - 150
Glufosinate	99.4		P	40 - 150
Glyphosate	87.9		P	40 - 150
Sucralose	71.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P410241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	30 - 160
2,4,5-T	76.9		P	30 - 160
Acetaminophen	77.4		P	30 - 150
Acetamiprid	92.8		P	30 - 160
Afidopyropen	69.4		P	30 - 160
Bentazon	38.8		P	30 - 150
Benzovindiflupyr	91.3		P	30 - 160
Carbamazepine	100		P	30 - 160
Clothianidin	102		P	30 - 160
Dinotefuran	106		P	30 - 160
Diuron	88.0		P	30 - 160
Fenuron	125		P	30 - 160
Fluridone	108		P	30 - 160
Hydrocodone	102		P	30 - 160
Ibuprofen	90.5		P	30 - 160
Imazapyr	105		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P410241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	108		P	30 - 160
Linuron	95.0		P	30 - 160
Mandestrobin	99.6		P	30 - 160
MCPP	122		P	30 - 160
Naproxen	83.1		P	30 - 160
Primidone	77.4		P	30 - 160
Pyraclostrobin	87.4		P	30 - 160
Silvex	77.6		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	46.5		P	30 - 160
Triclopyr	79.0		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P410330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	91.0		P	30 - 160
Aldicarb	90.3		P	30 - 150
Aldicarb Sulfone	97.2		P	30 - 160
Aldicarb Sulfoxide	99.4		P	30 - 160
Carbaryl	82.1		P	30 - 160
Carbofuran	91.1		P	30 - 160
Methiocarb	53.6		P	30 - 160
Methomyl	80.7		P	30 - 160
Oxamyl	67.2		P	30 - 160
Propoxur	82.8		P	30 - 160

Reference Method: SM 2320 B-2011

Batch ID: P410562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	94 - 106

Reference Method: SM 2320 B-2011

Batch ID: P410564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P410567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P410569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P410540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306588	Calcium	97.0		P	80 - 120
2306588	Iron	104		P	80 - 120
2306588	Magnesium	97.6		P	80 - 120
2306588	Potassium	101		P	80 - 120
2306588	Sodium	98.5		P	80 - 120
2306588	Strontium	98.2		P	80 - 120
2306588	Tin	99.3		P	80 - 120
2306588	Titanium	101		P	80 - 120
2306588	Vanadium	94.7		P	80 - 120
2306588	Zinc	97.4		P	80 - 120
2306932	Calcium	98.7		P	80 - 120
2306932	Iron	104	106	P/P	80 - 120
2306932	Magnesium	103	105	P/P	80 - 120
2306932	Potassium	98.4	100	P/P	80 - 120
2306932	Sodium	98.0		P	80 - 120
2306932	Strontium	97.1	99.0	P/P	80 - 120
2306932	Tin	99.0	99.8	P/P	80 - 120
2306932	Titanium	101	102	P/P	80 - 120
2306932	Vanadium	94.0	94.6	P/P	80 - 120
2306932	Zinc	99.6	99.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306588	Aluminum	99.5		P	80 - 120
2306588	Antimony	102		P	80 - 120
2306588	Arsenic	101		P	80 - 120
2306588	Barium	102		P	80 - 120
2306588	Beryllium	105		P	80 - 120
2306588	Boron	108		P	80 - 120
2306588	Cadmium	100		P	80 - 120
2306588	Chromium	96.9		P	80 - 120
2306588	Cobalt	94.6		P	80 - 120
2306588	Copper	94.3		P	80 - 120
2306588	Lead	100		P	80 - 120
2306588	Manganese	96.8		P	80 - 120
2306588	Molybdenum	101		P	80 - 120
2306588	Nickel	94.2		P	80 - 120
2306588	Selenium	95.2		P	80 - 120
2306588	Silver	103		P	80 - 120
2306588	Thallium	101		P	80 - 120
2306932	Aluminum	99.8	99.8	P/P	80 - 120
2306932	Antimony	102	103	P/P	80 - 120
2306932	Arsenic	103	103	P/P	80 - 120
2306932	Barium	102	104	P/P	80 - 120
2306932	Beryllium	102	103	P/P	80 - 120
2306932	Boron	102	103	P/P	80 - 120
2306932	Cadmium	102	102	P/P	80 - 120
2306932	Chromium	97.7	99.2	P/P	80 - 120
2306932	Cobalt	97.4	98.4	P/P	80 - 120
2306932	Copper	96.8	96.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P410276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306932	Lead	99.9	101	P/P	80 - 120
2306932	Manganese	97.8	98.9	P/P	80 - 120
2306932	Molybdenum	101	103	P/P	80 - 120
2306932	Nickel	97.9	98.9	P/P	80 - 120
2306932	Selenium	98.1	99.3	P/P	80 - 120
2306932	Silver	101	102	P/P	80 - 120
2306932	Thallium	99.2	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P410361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306977	Chloride	96.8		P	90 - 110
2307277	Chloride	94.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P410366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306977	Sulfate	98.8		P	90 - 110
2307277	Sulfate	98.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P410573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307141	Ammonia-N	97.8	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P410219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306923	Kjeldahl Nitrogen	94.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P410544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307180	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P410215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307183	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P410206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307184	O-Phosphate-P	97.2	97.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P410111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306916	Aldrin	61.3	57.8	P/P	10 - 89.0
2306916	Alpha-BHC	98.9	97.2	P/P	71 - 105
2306916	Alpha-Chlordane	75.2	86.7	P/P	43 - 107
2306916	Beta-BHC	136	158	P/F	57 - 152
2306916	Beta-Cyfluthrin	126	112	P/P	29 - 186
2306916	Bifenthrin	91.7	83.0	P/P	19 - 119
2306916	Chlorothalonil	21.0	9.97	P/F	10 - 245
2306916	Cis-Nonachlor	72.8	69.6	P/P	36 - 110
2306916	Cypermethrin	116	115	P/P	24 - 169
2306916	Dacthal	100	104	P/P	62 - 115
2306916	DDD-p,p'	57.3	55.4	P/P	36 - 109
2306916	DDE-p,p'	80.9	91.8	P/P	30 - 114
2306916	DDT-p,p'	122	141	F/F	42 - 108
2306916	Delta-BHC	142	158	P/P	60 - 164
2306916	Deltamethrin	118	110	P/P	10 - 210
2306916	Dichlobenil	48.7	56.3	P/P	23 - 108
2306916	Dicofol	38.2	27.8	F/F	44 - 109
2306916	Dieldrin	87.6	90.9	P/P	37 - 119
2306916	Endosulfan I	93.3	97.0	P/P	52 - 105
2306916	Endosulfan II	74.0	69.3	P/P	35 - 127
2306916	Endosulfan Sulfate	85.5	82.8	P/P	39 - 130
2306916	Endrin	74.2	67.2	P/P	30 - 116
2306916	Endrin Aldehyde	51.8	37.6	P/P	20 - 110
2306916	Endrin Ketone	109	103	P/P	48 - 134
2306916	Esfenvalerate	118	109	P/P	10 - 199
2306916	Ethalfuralin	80.5	80.6	P/P	48 - 95.0
2306916	Fenpropathrin	95.5	82.3	P/P	37 - 121
2306916	Gamma-BHC	120	124	P/P	61 - 126
2306916	Gamma-Chlordane	73.6	84.4	P/P	39 - 105
2306916	Heptachlor	74.6	70.1	P/P	38 - 96.0
2306916	Heptachlor Epoxide	92.7	97.1	P/P	42 - 114
2306916	Hexachlorobenzene	69.8	60.7	P/P	39 - 93.0
2306916	Kepone	90.7	99.0	P/P	10 - 215
2306916	Lambda-Cyhalothrin	142	120	P/P	10 - 204
2306916	Methoprene	69.1	75.2	P/P	17 - 108
2306916	Methoxychlor	86.7	83.7	P/P	56 - 115
2306916	MGK-264	74.8	66.3	P/P	35 - 120
2306916	Mirex	64.9	58.9	P/P	10 - 178
2306916	Oxychlordane	82.4	79.3	P/P	47 - 91.0
2306916	Permethrin	120	105	P/P	27 - 170
2306916	Phenothrin	131	131	P/P	10 - 133
2306916	Piperonyl Butoxide	111	104	P/P	23 - 150
2306916	Prallethrin	85.2	95.9	P/P	21 - 113
2306916	Tau-Fluvalinate	114	96.2	P/P	16 - 158
2306916	Tetramethrin	125	109	P/P	22 - 132
2306916	Trans-Nonachlor	85.0	92.0	P/P	43 - 102
2306916	Triclosan Methyl	78.5	89.7	P/P	49 - 109
2306916	Trifluralin	75.6	80.4	P/P	48 - 93.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P410273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307903	Acetochlor	92.0	93.4	P/P	65 - 124
2307903	Alachlor	81.9	86.5	P/P	61 - 121
2307903	Ametryn	94.3	99.2	P/P	52 - 216
2307903	Atrazine	85.9	88.1	P/P	68 - 133
2307903	Atrazine Desethyl	48.0	51.0	P/P	15 - 160
2307903	Azinphos Methyl	115	119	P/P	40 - 292
2307903	Azoxystrobin	90.2	104	P/P	12 - 242
2307903	Bromacil	74.9	73.9	P/P	54 - 167
2307903	Butylate	47.0	52.6	P/P	14 - 94.0
2307903	Caffeine	80.5	76.5	P/P	10 - 226
2307903	Carbophenothion	84.7	92.5	P/P	49 - 122
2307903	Carfentrazone Ethyl	95.8	97.6	P/P	53 - 138
2307903	Chlorfenapyr	95.1	93.6	P/P	50 - 150
2307903	Chlorpyrifos Ethyl	74.7	78.1	P/P	52 - 122
2307903	Chlorpyrifos Methyl	82.8	87.9	P/P	66 - 117
2307903	Coumaphos	77.2	80.1	P/P	50 - 220
2307903	Cyanazine	96.2	95.8	P/P	43 - 245
2307903	Cyprodinil	108	112	P/P	50 - 150
2307903	Demeton	98.6	101	P/P	43 - 188
2307903	Diazinon	92.3	93.5	P/P	69 - 131
2307903	Difenoconazole	91.0	97.6	P/P	34 - 231
2307903	Dimethenamid	78.1	77.3	P/P	55 - 118
2307903	Dimethomorph	156	166	F/F	50 - 150
2307903	Disulfoton	84.3	93.1	P/P	38 - 141
2307903	Dithiopyr	73.1	75.1	P/P	42 - 116
2307903	EPTC	45.6	61.2	P/P	18 - 85.0
2307903	Ethion	73.2	59.7	P/P	10 - 131
2307903	Ethoprop	79.2	82.3	P/P	65 - 129
2307903	Etridiazole	51.4	59.6	P/P	50 - 150
2307903	Fenamiphos	79.7	92.9	P/P	31 - 137
2307903	Fenbuconazole	81.0	83.5	P/P	57 - 160
2307903	Fipronil	101	103	P/P	62 - 132
2307903	Fipronil Desulfinyl	99.4	105	P/P	57 - 131
2307903	Fipronil Sulfide	86.4	87.7	P/P	15 - 138
2307903	Fipronil Sulfone	67.6	60.2	P/P	21 - 134
2307903	Fluazifop-P-butyl	88.3	88.9	P/P	54 - 133
2307903	Fludioxonil	84.4	81.8	P/P	58 - 127
2307903	Flumioxazin	80.5	97.7	P/P	33 - 300
2307903	Flutolanil	90.2	86.9	P/P	42 - 130
2307903	Fluxapyroxad	75.3	72.6	P/P	23 - 141
2307903	Fonofos	73.9	80.2	P/P	58 - 119
2307903	Hexazinone	84.7	90.4	P/P	68 - 172
2307903	Imazalil	73.3	76.7	P/P	48 - 283
2307903	Iprodione	83.5	85.9	P/P	38 - 140
2307903	Loratadine	139	148	P/P	50 - 150
2307903	Malathion	75.1	77.6	P/P	40 - 137
2307903	Metalaxyl	86.3	85.2	P/P	21 - 129
2307903	Metolachlor	79.8	81.5	P/P	55 - 122
2307903	Metribuzin	84.3	87.8	P/P	38 - 187
2307903	Mevinphos	76.6	78.5	P/P	54 - 134
2307903	Molinate	52.8	64.1	P/P	41 - 97.0
2307903	Myclobutanil	76.1	82.8	P/P	56 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P410273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307903	Naled	67.1	65.6	P/P	10 - 108
2307903	Napropamide	81.7	75.8	P/P	50 - 150
2307903	Norflurazon	77.8	83.1	P/P	32 - 122
2307903	Oxadiazon	71.4	70.4	P/P	40 - 119
2307903	Oxyfluorfen	110	112	P/P	61 - 153
2307903	Parathion Ethyl	83.2	85.5	P/P	59 - 130
2307903	Parathion Methyl	107	114	P/P	65 - 155
2307903	Pendimethalin	96.2	107	P/P	49 - 138
2307903	Phenytoin	42.1	30.4	F/F	50 - 200
2307903	Phorate	73.4	77.0	P/P	54 - 161
2307903	Prodiamine	40.2	41.9	P/P	33 - 161
2307903	Prometon	92.7	101	P/P	48 - 140
2307903	Prometryn	96.1	101	P/P	55 - 134
2307903	Pronamide	90.4	95.4	P/P	66 - 137
2307903	Propanil	111	113	P/P	50 - 150
2307903	Propargite	70.4	70.5	P/P	50 - 200
2307903	Propiconazole	80.7	90.1	P/P	36 - 150
2307903	Pyraflufen Ethyl	76.2	82.5	P/P	50 - 150
2307903	Pyridaben	69.1	90.0	P/P	50 - 200
2307903	Pyriproxyfen	86.0	85.9	P/P	10 - 165
2307903	Simazine	88.6	90.7	P/P	57 - 145
2307903	Stirophos	69.5	59.6	P/P	50 - 150
2307903	Tebuconazole	66.2	52.7	P/P	10 - 127
2307903	Terbufos	93.3	101	P/P	59 - 138
2307903	Terbuthylazine	84.0	89.0	P/P	68 - 119
2307903	Thiobencarb	73.2	83.5	P/P	50 - 150
2307903	Triadimefon	79.6	81.2	P/P	50 - 150

Reference Method: EPA 8276

Batch ID: P410111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307285	Chlordane	75.1	81.5	P/P	55 - 128
2307285	Toxaphene	75.4	77.6	P/P	57 - 211

Reference Method: EPA 8321B

Batch ID: P410177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306763	Acesulfame K	66.1	66.0	P/P	40 - 150
2306763	AMPA	60.9	63.6	P/P	40 - 150
2306763	Endothall	140	108	P/P	40 - 150
2306763	Glufosinate	83.7	89.1	P/P	40 - 150
2306763	Glyphosate	68.6	75.6	P/P	40 - 150
2306763	Sucralose	72.2	64.3	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P410241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306763	2,4-D	129	125	P/P	30 - 160
2306763	2,4,5-T	97.4	114	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P410241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2306763	Acetaminophen	89.8	77.2	P/P	30 - 150
2306763	Acetamiprid	97.5	87.0	P/P	30 - 160
2306763	Afidopyropen	77.6	65.6	P/P	30 - 160
2306763	Benzovindiflupyr	107	86.3	P/P	30 - 160
2306763	Carbamazepine	108	95.8	P/P	30 - 160
2306763	Clothianidin	109	92.0	P/P	30 - 160
2306763	Dinotefuran	143	117	P/P	30 - 160
2306763	Diuron	87.0	77.6	P/P	30 - 160
2306763	Fenuron	125	104	P/P	30 - 160
2306763	Fluridone	121	108	P/P	30 - 160
2306763	Hydrocodone	108	97.4	P/P	30 - 160
2306763	Ibuprofen	87.3	73.7	P/P	30 - 160
2306763	Imazapyr	119	91.5	P/P	30 - 160
2306763	Imidacloprid	222	195	F/F	30 - 160
2306763	Linuron	97.1	97.4	P/P	30 - 160
2306763	Mandestrobin	112	100	P/P	30 - 160
2306763	MCCP	135	135	P/P	30 - 160
2306763	Naproxen	82.2	73.1	P/P	30 - 160
2306763	Primidone	114	84.6	P/P	30 - 160
2306763	Pyraclostrobin	108	90.9	P/P	30 - 160
2306763	Silvex	106	116	P/P	30 - 160
2306763	Thiamethoxam	166	152	F/P	30 - 160
2306763	Tolfenpyrad	65.7	55.4	P/P	30 - 160
2306763	Triclopyr	104	100	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P410330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307156	3-Hydroxycarbofuran	81.7	105	P/P	30 - 160
2307156	Aldicarb	78.2	91.8	P/P	30 - 150
2307156	Aldicarb Sulfone	94.7	100	P/P	30 - 160
2307156	Aldicarb Sulfoxide	58.4	62.3	P/P	30 - 160
2307156	Carbaryl	76.4	79.3	P/P	30 - 160
2307156	Carbofuran	86.8	88.7	P/P	30 - 160
2307156	Methiocarb	57.6	60.4	P/P	30 - 160
2307156	Methomyl	74.2	81.4	P/P	30 - 160
2307156	Oxamyl	71.3	73.4	P/P	30 - 160
2307156	Propoxur	79.3	80.2	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P410567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307391	Fluoride	98.4	98.4	P/P	92 - 107

Reference Method: SM 4500 F-C-2011

Batch ID: P410569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307321	Fluoride	102	102	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P410540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307632	Organic Carbon	97.2	99.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P410196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307140	Color (true)	1.17	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306957	Turbidity	10.4	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306932	Calcium	1.28	Spike	P	0 - 20
2306932	Iron	1.63	Spike	P	0 - 20
2306932	Magnesium	1.21	Spike	P	0 - 20
2306932	Potassium	1.45	Spike	P	0 - 20
2306932	Sodium	0.689	Spike	P	0 - 20
2306932	Strontium	1.88	Spike	P	0 - 20
2306932	Tin	0.817	Spike	P	0 - 20
2306932	Titanium	0.309	Spike	P	0 - 20
2306932	Vanadium	0.613	Spike	P	0 - 20
2306932	Zinc	0.108	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306932	Aluminum	0.00249	Spike	P	0 - 20
2306932	Antimony	1.22	Spike	P	0 - 20
2306932	Arsenic	0.259	Spike	P	0 - 20
2306932	Barium	1.89	Spike	P	0 - 20
2306932	Beryllium	0.549	Spike	P	0 - 20
2306932	Boron	0.993	Spike	P	0 - 20
2306932	Cadmium	0.0492	Spike	P	0 - 20
2306932	Chromium	1.59	Spike	P	0 - 20
2306932	Cobalt	0.986	Spike	P	0 - 20
2306932	Copper	0.0328	Spike	P	0 - 20
2306932	Lead	1.04	Spike	P	0 - 20
2306932	Manganese	0.861	Spike	P	0 - 20
2306932	Molybdenum	1.23	Spike	P	0 - 20
2306932	Nickel	0.973	Spike	P	0 - 20
2306932	Selenium	1.16	Spike	P	0 - 20
2306932	Silver	0.532	Spike	P	0 - 20
2306932	Thallium	3.59	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306977	Chloride	0.134	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306977	Sulfate	0.195	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307141	Ammonia-N	1.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306923	Kjeldahl Nitrogen	5.20	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307180	NO2NO3-N	0.962	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307183	Total-P	0.922	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307184	O-Phosphate-P	0.718	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P410111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306916	Aldrin	5.94	Spike	P	0 - 37
2306916	Alpha-BHC	1.61	Spike	P	0 - 16

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P410111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306916	Alpha-Chlordane	14.2	Spike	P	0 - 28
2306916	Beta-BHC	14.5	Spike	P	0 - 32
2306916	Beta-Cyfluthrin	11.9	Spike	P	0 - 41
2306916	Bifenthrin	10.0	Spike	P	0 - 36
2306916	Chlorothalonil	71.4	Spike	F	0 - 54
2306916	Cis-Nonachlor	4.39	Spike	P	0 - 33
2306916	Cypermethrin	1.05	Spike	P	0 - 38
2306916	Dacthal	4.08	Spike	P	0 - 23
2306916	DDD-p,p'	3.43	Spike	P	0 - 35
2306916	DDE-p,p'	12.6	Spike	P	0 - 27
2306916	DDT-p,p'	14.4	Spike	P	0 - 31
2306916	Delta-BHC	10.6	Spike	P	0 - 30
2306916	Deltamethrin	7.66	Spike	P	0 - 76
2306916	Dichlobenil	14.6	Spike	P	0 - 33
2306916	Dicofol	31.3	Spike	F	0 - 24
2306916	Dieldrin	3.71	Spike	P	0 - 35
2306916	Endosulfan I	3.89	Spike	P	0 - 25
2306916	Endosulfan II	6.58	Spike	P	0 - 31
2306916	Endosulfan Sulfate	3.20	Spike	P	0 - 38
2306916	Endrin	9.81	Spike	P	0 - 53
2306916	Endrin Aldehyde	31.8	Spike	P	0 - 81
2306916	Endrin Ketone	4.80	Spike	P	0 - 33
2306916	Esfenvalerate	7.45	Spike	P	0 - 46
2306916	Ethalfuralin	0.0776	Spike	P	0 - 22
2306916	Fenpropathrin	14.8	Spike	P	0 - 29
2306916	Gamma-BHC	3.43	Spike	P	0 - 17
2306916	Gamma-Chlordane	13.7	Spike	P	0 - 28
2306916	Heptachlor	6.13	Spike	P	0 - 28
2306916	Heptachlor Epoxide	4.61	Spike	P	0 - 23
2306916	Hexachlorobenzene	13.9	Spike	P	0 - 22
2306916	Kepone	8.73	Spike	P	0 - 61
2306916	Lambda-Cyhalothrin	16.5	Spike	P	0 - 52
2306916	Methoprene	8.39	Spike	P	0 - 38
2306916	Methoxychlor	3.46	Spike	P	0 - 29
2306916	MGK-264	12.0	Spike	P	0 - 41
2306916	Mirex	9.59	Spike	P	0 - 39
2306916	Oxychlordane	3.91	Spike	P	0 - 33
2306916	Permethrin	12.5	Spike	P	0 - 39
2306916	Phenothrin	0.369	Spike	P	0 - 52
2306916	Piperonyl Butoxide	6.76	Spike	P	0 - 91
2306916	Prallethrin	11.8	Spike	P	0 - 34
2306916	Tau-Fluvalinate	17.3	Spike	P	0 - 41
2306916	Tetramethrin	13.3	Spike	P	0 - 43
2306916	Trans-Nonachlor	7.95	Spike	P	0 - 31
2306916	Triclosan Methyl	13.3	Spike	P	0 - 24
2306916	Trifluralin	6.10	Spike	P	0 - 23

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P410273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307903	Acetochlor	1.55	Spike	P	0 - 27
2307903	Alachlor	5.42	Spike	P	0 - 27
2307903	Ametryn	5.01	Spike	P	0 - 34
2307903	Atrazine	2.01	Spike	P	0 - 41
2307903	Atrazine Desethyl	4.81	Spike	P	0 - 38
2307903	Azinphos Methyl	3.10	Spike	P	0 - 62
2307903	Azoxystrobin	14.1	Spike	P	0 - 32
2307903	Bromacil	1.45	Spike	P	0 - 30
2307903	Butylate	11.2	Spike	P	0 - 59
2307903	Caffeine	5.16	Spike	P	0 - 60
2307903	Carbophenothion	8.79	Spike	P	0 - 25
2307903	Carfentrazone Ethyl	1.94	Spike	P	0 - 26
2307903	Chlorfenapyr	1.49	Spike	P	0 - 30
2307903	Chlorpyrifos Ethyl	4.46	Spike	P	0 - 27
2307903	Chlorpyrifos Methyl	6.00	Spike	P	0 - 26
2307903	Coumaphos	3.77	Spike	P	0 - 30
2307903	Cyanazine	0.404	Spike	P	0 - 58
2307903	Cyprodinil	4.27	Spike	P	0 - 30
2307903	Demeton	2.39	Spike	P	0 - 25
2307903	Diazinon	1.19	Spike	P	0 - 29
2307903	Difenoconazole	6.96	Spike	P	0 - 25
2307903	Dimethenamid	1.05	Spike	P	0 - 30
2307903	Dimethomorph	6.08	Spike	P	0 - 30
2307903	Disulfoton	10.0	Spike	P	0 - 33
2307903	Dithiopyr	2.62	Spike	P	0 - 22
2307903	EPTC	29.1	Spike	P	0 - 38
2307903	Ethion	20.2	Spike	P	0 - 79
2307903	Ethoprop	3.80	Spike	P	0 - 23
2307903	Etridiazole	14.7	Spike	P	0 - 30
2307903	Fenamiphos	15.3	Spike	P	0 - 58
2307903	Fenbuconazole	2.95	Spike	P	0 - 37
2307903	Fipronil	1.14	Spike	P	0 - 33
2307903	Fipronil Desulfinyl	5.59	Spike	P	0 - 26
2307903	Fipronil Sulfide	1.54	Spike	P	0 - 37
2307903	Fipronil Sulfone	8.22	Spike	P	0 - 50
2307903	Fluazifop-P-butyl	0.652	Spike	P	0 - 24
2307903	Fludioxonil	3.08	Spike	P	0 - 26
2307903	Flumioxazin	19.4	Spike	P	0 - 37
2307903	Flutolanil	3.74	Spike	P	0 - 26
2307903	Fluxapyroxad	3.72	Spike	P	0 - 34
2307903	Fonofos	8.18	Spike	P	0 - 27
2307903	Hexazinone	6.46	Spike	P	0 - 36
2307903	Imazalil	4.46	Spike	P	0 - 65
2307903	Iprodione	2.81	Spike	P	0 - 33
2307903	Loratadine	6.06	Spike	P	0 - 30
2307903	Malathion	3.20	Spike	P	0 - 44
2307903	Metalaxyl	1.25	Spike	P	0 - 38
2307903	Metolachlor	2.08	Spike	P	0 - 36
2307903	Metribuzin	4.12	Spike	P	0 - 63
2307903	Mevinphos	2.51	Spike	P	0 - 26
2307903	Molinate	19.3	Spike	P	0 - 40

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P410273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307903	Myclobutanil	8.49	Spike	P	0 - 21
2307903	Naled	2.36	Spike	P	0 - 26
2307903	Napropamide	7.40	Spike	P	0 - 30
2307903	Norflurazon	6.57	Spike	P	0 - 24
2307903	Oxadiazon	1.49	Spike	P	0 - 27
2307903	Oxyfluorfen	1.50	Spike	P	0 - 24
2307903	Parathion Ethyl	2.78	Spike	P	0 - 28
2307903	Parathion Methyl	6.65	Spike	P	0 - 27
2307903	Pendimethalin	10.5	Spike	P	0 - 31
2307903	Phenytoin	32.3	Spike	F	0 - 30
2307903	Phorate	4.76	Spike	P	0 - 27
2307903	Prodiamine	4.00	Spike	P	0 - 52
2307903	Prometon	8.22	Spike	P	0 - 31
2307903	Prometryn	4.97	Spike	P	0 - 28
2307903	Pronamide	5.28	Spike	P	0 - 26
2307903	Propanil	1.88	Spike	P	0 - 30
2307903	Propargite	0.142	Spike	P	0 - 30
2307903	Propiconazole	10.9	Spike	P	0 - 31
2307903	Pyraflufen Ethyl	7.95	Spike	P	0 - 30
2307903	Pyridaben	26.3	Spike	P	0 - 30
2307903	Pyriproxyfen	0.0974	Spike	P	0 - 50
2307903	Simazine	2.33	Spike	P	0 - 29
2307903	Stirophos	15.4	Spike	P	0 - 30
2307903	Sulfentrazone	1.06	Spike	P	0 - 33
2307903	Tebuconazole	22.7	Spike	P	0 - 44
2307903	Terbufos	7.85	Spike	P	0 - 29
2307903	Terbuthylazine	5.78	Spike	P	0 - 27
2307903	Thiobencarb	13.1	Spike	P	0 - 30
2307903	Triadimefon	2.01	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P410111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307285	Chlordane	8.14	Spike	P	0 - 25
2307285	Toxaphene	2.90	Spike	P	0 - 24

Reference Method: EPA 8321B

Batch ID: P410177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306763	Acesulfame K	0.166	Spike	P	0 - 30
2306763	AMPA	4.10	Spike	P	0 - 30
2306763	Endothall	25.5	Spike	P	0 - 30
2306763	Glufosinate	6.29	Spike	P	0 - 30
2306763	Glyphosate	8.08	Spike	P	0 - 30
2306763	Sucralose	11.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P410241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306763	2,4-D	2.47	Spike	P	0 - 30
2306763	2,4,5-T	15.4	Spike	P	0 - 30
2306763	Acetaminophen	15.1	Spike	P	0 - 30
2306763	Acetamiprid	11.4	Spike	P	0 - 30
2306763	Afidopyropen	16.8	Spike	P	0 - 30
2306763	Bentazon	1.31	Spike	P	0 - 30
2306763	Benzovindiflupyr	21.5	Spike	P	0 - 30
2306763	Carbamazepine	12.0	Spike	P	0 - 30
2306763	Clothianidin	17.2	Spike	P	0 - 30
2306763	Dinotefuran	20.0	Spike	P	0 - 30
2306763	Diuron	11.4	Spike	P	0 - 30
2306763	Fenuron	19.0	Spike	P	0 - 30
2306763	Fluridone	11.0	Spike	P	0 - 30
2306763	Hydrocodone	10.0	Spike	P	0 - 30
2306763	Ibuprofen	16.9	Spike	P	0 - 30
2306763	Imazapyr	13.8	Spike	P	0 - 30
2306763	Imidacloprid	13.1	Spike	P	0 - 30
2306763	Linuron	0.248	Spike	P	0 - 30
2306763	Mandestrobin	11.3	Spike	P	0 - 30
2306763	MCP	0.504	Spike	P	0 - 30
2306763	Naproxen	11.7	Spike	P	0 - 30
2306763	Primidone	29.4	Spike	P	0 - 30
2306763	Pyraclostrobin	17.4	Spike	P	0 - 30
2306763	Silvex	9.36	Spike	P	0 - 30
2306763	Thiamethoxam	9.07	Spike	P	0 - 30
2306763	Tolfenpyrad	17.1	Spike	P	0 - 30
2306763	Triclopyr	3.32	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P410330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307156	3-Hydroxycarbofuran	24.6	Spike	P	0 - 30
2307156	Aldicarb	16.1	Spike	P	0 - 30
2307156	Aldicarb Sulfone	5.84	Spike	P	0 - 30
2307156	Aldicarb Sulfoxide	6.44	Spike	P	0 - 30
2307156	Carbaryl	3.67	Spike	P	0 - 30
2307156	Carbofuran	2.24	Spike	P	0 - 30
2307156	Methiocarb	4.75	Spike	P	0 - 30
2307156	Methomyl	9.28	Spike	P	0 - 30
2307156	Oxamyl	2.84	Spike	P	0 - 30
2307156	Propoxur	1.12	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P410562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307391	Total Alkalinity	0.0712	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P410564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307321	Total Alkalinity	0.209	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P410637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2306929	TDS	2.00	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P410567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307391	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P410569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307321	Fluoride	0.470	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307632	Organic Carbon	1.51	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2307156
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	91.4	P	30 - 160

Lab Sample ID: 2307157
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Diuron-d6	93.4	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.2	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	92.8	P	30 - 160

Lab Sample ID: 2307158
Field Sample ID: G4NW0365

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	122	P	30 - 160
EPA 8321B	Diuron-d6	105	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.2	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	85.3	P	30 - 160

Lab Sample ID: 2307159
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	85.0	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	57.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	78.1	P	30 - 97.0
EPA 8276	PCNB	82.7	P	45 - 119

Lab Sample ID: 2307160
Field Sample ID: G4NW0382

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	53.9	P	20 - 200
EPA 8270E	Simazine-d10	110	P	71 - 140
EPA 8270E	Terbufos-d10	95.2	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110543

Included Lab Sample IDs: 2307140, 2307143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.4	P/P	90 - 110
Sulfate	101	99.9	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A110549

Included Lab Sample IDs: 2307140, 2307143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	100	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110551

Included Lab Sample IDs: 2307140, 2307143

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: A110552

Included Lab Sample IDs: 2307142, 2307145

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110609

Included Lab Sample IDs: 2307161, 2307162, 2307163, 2307164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.5	99.0	P/P	90 - 110
Antimony	94.8	96.7	P/P	90 - 110
Arsenic	97.8	99.1	P/P	90 - 110
Barium	96.4	98.5	P/P	90 - 110
Beryllium	102	98.8	P/P	90 - 110
Boron	101	101	P/P	90 - 110
Cadmium	98.1	98.4	P/P	90 - 110
Chromium	94.2	95.0	P/P	90 - 110
Cobalt	93.5	94.1	P/P	90 - 110
Copper	94.2	95.5	P/P	90 - 110
Lead	97.5	96.7	P/P	90 - 110
Manganese	94.2	95.1	P/P	90 - 110
Molybdenum	97.4	97.5	P/P	90 - 110
Nickel	95.1	94.9	P/P	90 - 110
Selenium	97.0	96.8	P/P	90 - 110
Silver	93.6	93.5	P/P	90 - 110
Thallium	101	97.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A110616

Included Lab Sample IDs: 2307157, 2307158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	82.9	91.3	P/P	60 - 160
Glufosinate	92.5	114	P/P	60 - 160
Glyphosate	81.1	101	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110630

Included Lab Sample IDs: 2307141, 2307144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110643

Included Lab Sample IDs: 2307157, 2307158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.8	89.1	P/P	50 - 150
2,4,5-T	125	125	P/P	50 - 150
3-Hydroxycarbofuran	114	110	P/P	60 - 150
Acetaminophen	102	117	P/P	60 - 160
Acetamiprid	108	109	P/P	50 - 150
Afidopyropen	104	114	P/P	50 - 150
Aldicarb	106	122	P/P	60 - 150
Aldicarb Sulfone	109	104	P/P	50 - 150
Aldicarb Sulfoxide	103	104	P/P	50 - 150
Bentazon	111	105	P/P	50 - 160
Benzovindiflupyr	107	103	P/P	50 - 160
Carbamazepine	106	111	P/P	60 - 150
Carbaryl	103	107	P/P	60 - 150
Carbofuran	113	106	P/P	50 - 150
Clothianidin	106	108	P/P	60 - 150
Dinotefuran	110	110	P/P	50 - 150
Diuron	108	101	P/P	60 - 160
Fenuron	110	109	P/P	60 - 150
Fluridone	125	114	P/P	60 - 160
Hydrocodone	109	109	P/P	60 - 150
Ibuprofen	65.4	98.6	P/P	50 - 160
Imazapyr	118	111	P/P	50 - 150
Imidacloprid	112	96.1	P/P	60 - 150
Linuron	128	122	P/P	60 - 150
Mandestrobin	106	107	P/P	50 - 150
MCPP	117	117	P/P	50 - 150
Methiocarb	102	108	P/P	50 - 150
Methomyl	105	106	P/P	50 - 150
Naproxen	73.1	77.6	P/P	50 - 160
Oxamyl	98.7	105	P/P	50 - 150
Primidone	120	94.7	P/P	60 - 150
Propoxur	105	106	P/P	50 - 150
Pyraclostrobin	106	120	P/P	60 - 150
Silvex	102	98.2	P/P	50 - 150
Thiamethoxam	117	115	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A110643

Included Lab Sample IDs: 2307157, 2307158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	120	127	P/P	60 - 150
Triclopyr	110	104	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110646

Included Lab Sample IDs: 2307165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.5	96.8	P/P	90 - 110
Antimony	98.1	97.0	P/P	90 - 110
Arsenic	97.9	97.5	P/P	90 - 110
Beryllium	97.5	98.9	P/P	90 - 110
Boron	94.7	93.0	P/P	90 - 110
Cadmium	99.1	98.2	P/P	90 - 110
Chromium	101	99.1	P/P	90 - 110
Cobalt	94.2	94.1	P/P	90 - 110
Copper	95.0	94.7	P/P	90 - 110
Lead	92.9	92.5	P/P	90 - 110
Manganese	99.0	98.8	P/P	90 - 110
Molybdenum	98.6	96.8	P/P	90 - 110
Nickel	95.0	94.3	P/P	90 - 110
Selenium	98.0	97.6	P/P	90 - 110
Thallium	98.4	96.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110649

Included Lab Sample IDs: 2307141, 2307144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	96.8	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A110651

Included Lab Sample IDs: 2307159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.5		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8321B

Run ID: A110657

Included Lab Sample IDs: 2307157, 2307158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	111	P/P	60 - 160
Endothall	142	135	P/P	60 - 160
Sucralose	86.9	91.3	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110663

Included Lab Sample IDs: 2307165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	99.8	P/P	90 - 110
Silver	91.6	90.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110673

Included Lab Sample IDs: 2307161, 2307162, 2307163, 2307164, 2307165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.8	98.3	P/P	90 - 110
Calcium	98.3	96.7	P/P	90 - 110
Iron	101	98.4	P/P	90 - 110
Iron	103	101	P/P	90 - 110
Magnesium	101	98.9	P/P	90 - 110
Magnesium	98.9	96.4	P/P	90 - 110
Potassium	97.7	96.1	P/P	90 - 110
Potassium	98.8	97.7	P/P	90 - 110
Sodium	98.4	98.5	P/P	90 - 110
Sodium	98.5	97.9	P/P	90 - 110
Strontium	97.5	97.3	P/P	90 - 110
Strontium	98.0	97.5	P/P	90 - 110
Tin	98.6	97.9	P/P	90 - 110
Tin	98.8	98.6	P/P	90 - 110
Titanium	99.1	98.7	P/P	90 - 110
Titanium	99.6	99.1	P/P	90 - 110
Vanadium	98.2	97.7	P/P	90 - 110
Vanadium	98.8	98.2	P/P	90 - 110
Zinc	100	99.3	P/P	90 - 110
Zinc	99.3	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110682

Included Lab Sample IDs: 2307141, 2307144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110701

Included Lab Sample IDs: 2307141, 2307144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	96.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110710

Included Lab Sample IDs: 2307140, 2307143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.9	98.3	P/P	90 - 110
Total Alkalinity	97.4	97.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A110710

Included Lab Sample IDs: 2307140, 2307143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110711

Included Lab Sample IDs: 2307141, 2307144

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

Reference Method: EPA 8270E

Run ID: A110752

Included Lab Sample IDs: 2307159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	98.1		P	80 - 120
Alpha-Chlordane	95.9		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	85.1		P	80 - 120
Bifenthrin	104		P	80 - 120
Chlorothalonil	88.9		P	80 - 120
Cis-Nonachlor	101		P	80 - 120
Cypermethrin	104		P	80 - 120
Dacthal	96.0		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	98.6		P	80 - 120
DDT-p,p'	87.1		P	80 - 120
Delta-BHC	94.1		P	80 - 120
Deltamethrin	80.9		P	80 - 120
Dichlobenil	102		P	80 - 120
Dieldrin	96.5		P	80 - 120
Endosulfan I	97.1		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	103		P	80 - 120
Endrin	106		P	80 - 120
Endrin Aldehyde	105		P	80 - 120
Endrin Ketone	102		P	80 - 120
Esfenvalerate	91.4		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	101		P	80 - 120
Gamma-BHC	99.2		P	80 - 120
Gamma-Chlordane	95.4		P	80 - 120
Heptachlor	98.3		P	80 - 120
Heptachlor Epoxide	98.8		P	80 - 120
Hexachlorobenzene	99.8		P	80 - 120
Kepone	117		P	80 - 120
Lambda-Cyhalothrin	94.1		P	80 - 120
Methoprene	90.8		P	80 - 120
Methoxychlor	96.0		P	80 - 120
MGK-264	95.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110752
Included Lab Sample IDs: 2307159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	100		P	80 - 120
Oxychlordane	91.6		P	80 - 120
Permethrin	96.2		P	80 - 120
Phenothrin	94.3		P	80 - 120
Piperonyl Butoxide	102		P	80 - 120
Prallethrin	97.9		P	80 - 120
Tau-Fluvalinate	92.4		P	80 - 120
Tetramethrin	105		P	80 - 120
Trans-Nonachlor	98.4		P	80 - 120
Triclosan Methyl	91.2		P	80 - 120
Trifluralin	98.4		P	80 - 120

Reference Method: EPA 8270E
Run ID: A110755
Included Lab Sample IDs: 2307159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dicofol	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A110796
Included Lab Sample IDs: 2307160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	114		P	80 - 120
Atrazine	97.0		P	80 - 120
Atrazine Desethyl	89.4		P	80 - 120
Azinphos Methyl	97.4		P	80 - 120
Azoxystrobin	99.7		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	100		P	80 - 120
Caffeine	84.9		P	80 - 120
Carbophenothion	107		P	80 - 120
Carfentrazone Ethyl	102		P	80 - 120
Chlorfenapyr	103		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	98.5		P	80 - 120
Coumaphos	95.1		P	80 - 120
Cyanazine	102		P	80 - 120
Cyprodinil	109		P	80 - 120
Demeton	93.2		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	93.5		P	80 - 120
Dimethenamid	106		P	80 - 120
Dimethomorph	103		P	80 - 120
Disulfoton	100		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	103		P	80 - 120
Ethion	96.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110796
Included Lab Sample IDs: 2307160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	100		P	80 - 120
Etridiazole	94.8		P	80 - 120
Fenamiphos	99.7		P	80 - 120
Fenbuconazole	96.0		P	80 - 120
Fipronil	105		P	80 - 120
Fipronil Sulfide	105		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	103		P	80 - 120
Fludioxonil	99.7		P	80 - 120
Flumioxazin	91.5		P	80 - 120
Flutolanil	103		P	80 - 120
Fluxapyroxad	98.3		P	80 - 120
Fonofos	105		P	80 - 120
Hexazinone	108		P	80 - 120
Imazalil	102		P	80 - 120
Iprodione	102		P	80 - 120
Loratadine	108		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	117		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	106		P	80 - 120
Myclobutanil	106		P	80 - 120
Naled	103		P	80 - 120
Napropamide	102		P	80 - 120
Norflurazon	98.7		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	109		P	80 - 120
Parathion Ethyl	99.6		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	93.4		P	80 - 120
Phenytoin	99.7		P	80 - 120
Phorate	107		P	80 - 120
Prodiamine	96.4		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	101		P	80 - 120
Pronamide	95.4		P	80 - 120
Propanil	103		P	80 - 120
Propargite	101		P	80 - 120
Propiconazole	95.9		P	80 - 120
Pyraflufen Ethyl	103		P	80 - 120
Pyridaben	95.8		P	80 - 120
Pyriproxyfen	103		P	80 - 120
Simazine	96.0		P	80 - 120
Stirophos	98.9		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	105		P	80 - 120
Terbuthylazine	104		P	80 - 120
Thiobencarb	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110796
Included Lab Sample IDs: 2307160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triadimefon	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A110861
Included Lab Sample IDs: 2307160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Desulfinyl	105		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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	98.7				1.17	
EPA 180.1 Rev. 2.0	Turbidity	97.4				10.4	
EPA 200.7 Rev. 4.4	Calcium	100	97.0	98.7			1.28
	Iron	106	104	104	106		1.63
	Magnesium	105	97.6	103	105		1.21
	Potassium	104	101	98.4	100		1.45
	Sodium	99.8	98.5	98.0			0.689
	Strontium	99.3	98.2	97.1	99.0		1.88
	Tin	101	99.3	99.0	99.8		0.817
	Titanium	101	101	101	102		0.309
	Vanadium	93.6	94.7	94.0	94.6		0.613
	Zinc	98.4	97.4	99.6	99.7		0.108
EPA 200.8 Rev. 5.4	Aluminum	99.5	99.8	99.8	99.5		0.0024
	Antimony	100	102	103	102		1.22
	Arsenic	102	103	103	101		0.259
	Barium	103	102	104	102		1.89
	Beryllium	101	102	103	105		0.549
	Boron	99.3	102	103	108		0.993
	Cadmium	97.5	102	102	100		0.0492
	Chromium	97.4	97.7	99.2	96.9		1.59
	Cobalt	98.1	97.4	98.4	94.6		0.986
	Copper	98.0	96.8	96.7	94.3		0.0328
	Lead	99.5	99.9	101	100		1.04
	Manganese	96.9	97.8	98.9	96.8		0.861
	Molybdenum	99.3	101	103	101		1.23
	Nickel	99.9	97.9	98.9	94.2		0.973
	Selenium	99.1	98.1	99.3	95.2		1.16
	Silver	103	101	102	103		0.532
	Thallium	98.1	99.2	103	101		3.59
EPA 300.0 Rev. 2.1	Chloride	99.6	96.8	94.6		0.134	
	Sulfate	99.5	98.8	98.3		0.195	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	97.8	99.6			1.70
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.4	94.5	100			5.20
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104	104			0.962
EPA 365.1 Rev. 2.0	Total-P	105	107	106			0.922
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	97.2	97.9			0.718
EPA 8270E	Acetochlor	90.2	93.4	92.0			1.55
	Alachlor	83.5	86.5	81.9			5.42
	Aldrin	61.4	61.3	57.8			5.94
	Alpha-BHC	92.2	98.9	97.2			1.61
	Alpha-Chlordane	83.3	75.2	86.7			14.2
	Ametryn	100	99.2	94.3			5.01
	Atrazine	87.8	88.1	85.9			2.01
	Atrazine Desethyl	63.7	51.0	48.0			4.81
	Azinphos Methyl	112	119	115			3.10
	Azoxystrobin	106	104	90.2			14.1
	Beta-BHC	106	136	158			14.5
	Beta-Cyfluthrin	94.2	126	112			11.9
	Bifenthrin	73.8	91.7	83.0			10.0
	Bromacil	84.8	73.9	74.9			1.45
	Butylate	50.1	52.6	47.0			11.2
	Caffeine	79.9	76.5	80.5			5.16
	Carbophenothion	99.3	92.5	84.7			8.79
	Carfentrazone Ethyl	96.9	97.6	95.8			1.94

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Chlorfenapyr	94.6	93.6	95.1		1.49
	Chlorothalonil	106	21.0	9.97		71.4
	Chlorpyrifos Ethyl	85.3	78.1	74.7		4.46
	Chlorpyrifos Methyl	92.8	87.9	82.8		6.00
	Cis-Nonachlor	72.2	72.8	69.6		4.39
	Coumaphos	85.4	80.1	77.2		3.77
	Cyanazine	88.9	95.8	96.2		0.404
	Cypermethrin	102	116	115		1.05
	Cyprodinil	107	112	108		4.27
	Dacthal	89.3	100	104		4.08
	DDD-p,p'	60.3	57.3	55.4		3.43
	DDE-p,p'	87.7	80.9	91.8		12.6
	DDT-p,p'	120	122	141		14.4
	Delta-BHC	104	142	158		10.6
	Deltamethrin	83.9	118	110		7.66
	Demeton	99.9	101	98.6		2.39
	Diazinon	90.2	93.5	92.3		1.19
	Dichlobenil	91.2	48.7	56.3		14.6
	Dicofol	34.0	38.2	27.8		31.3
	Dieldrin	85.0	87.6	90.9		3.71
	Difenoconazole	87.2	97.6	91.0		6.96
	Dimethenamid	75.1	77.3	78.1		1.05
	Dimethomorph	178	166	156		6.08
	Disulfoton	85.0	93.1	84.3		10.0
	Dithiopyr	72.5	75.1	73.1		2.62
	Endosulfan I	87.3	93.3	97.0		3.89
	Endosulfan II	73.4	74.0	69.3		6.58
	Endosulfan Sulfate	79.8	85.5	82.8		3.20
	Endrin	71.0	74.2	67.2		9.81
	Endrin Aldehyde	61.2	51.8	37.6		31.8
	Endrin Ketone	88.4	109	103		4.80
	EPTC	48.6	61.2	45.6		29.1
	Esfenvalerate	84.2	118	109		7.45
	Ethalfuralin	85.5	80.5	80.6		0.0776
	Ethion	64.5	59.7	73.2		20.2
	Ethoprop	80.9	82.3	79.2		3.80
	Etridiazole	51.5	59.6	51.4		14.7
	Fenamiphos	86.7	92.9	79.7		15.3
	Fenbuconazole	78.6	83.5	81.0		2.95
	Fenpropathrin	81.3	95.5	82.3		14.8
	Fipronil	95.2	103	101		1.14
	Fipronil Desulfinyl	101	99.4	105		5.59
	Fipronil Sulfide	86.6	87.7	86.4		1.54
	Fipronil Sulfone	70.7	60.2	67.6		8.22
	Fluazifop-P-butyl	90.0	88.9	88.3		0.652
	Fludioxonil	82.0	81.8	84.4		3.08
	Flumioxazin	73.0	97.7	80.5		19.4
	Flutolanil	92.5	86.9	90.2		3.74
	Fluxapyroxad	70.5	72.6	75.3		3.72
	Fonofos	78.8	80.2	73.9		8.18
	Gamma-BHC	99.2	120	124		3.43
	Gamma-Chlordane	84.4	73.6	84.4		13.7
	Heptachlor	75.7	74.6	70.1		6.13
	Heptachlor Epoxide	94.3	92.7	97.1		4.61

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Hexachlorobenzene	69.1	69.8	60.7		13.9
	Hexazinone	83.7	90.4	84.7		6.46
	Imazalil	76.1	76.7	73.3		4.46
	Iprodione	82.8	85.9	83.5		2.81
	Kepone	74.2	90.7	99.0		8.73
	Lambda-Cyhalothrin	88.2	142	120		16.5
	Loratadine	160	148	139		6.06
	Malathion	84.8	77.6	75.1		3.20
	Metalaxyl	83.0	85.2	86.3		1.25
	Methoprene	80.3	69.1	75.2		8.39
	Methoxychlor	86.1	86.7	83.7		3.46
	Metolachlor	81.5	81.5	79.8		2.08
	Metribuzin	94.4	84.3	87.8		4.12
	Mevinphos	81.7	76.6	78.5		2.51
	MGK-264	87.3	74.8	66.3		12.0
	Mirex	65.0	64.9	58.9		9.59
	Molinate	54.7	52.8	64.1		19.3
	Myclobutanil	89.5	76.1	82.8		8.49
	Naled	64.7	67.1	65.6		2.36
	Napropamide	82.0	81.7	75.8		7.40
	Norflurazon	81.9	77.8	83.1		6.57
	Oxadiazon	70.8	71.4	70.4		1.49
	Oxychlordane	79.8	82.4	79.3		3.91
	Oxyfluorfen	103	110	112		1.50
	Parathion Ethyl	87.0	83.2	85.5		2.78
	Parathion Methyl	113	107	114		6.65
	Pendimethalin	96.9	96.2	107		10.5
	Permethrin	100	120	105		12.5
	Phenothrin	73.8	131	131		0.369
	Phenytoin	29.5	42.1	30.4		32.3
	Phorate	72.1	73.4	77.0		4.76
	Piperonyl Butoxide	97.4	111	104		6.76
	Prallethrin	82.7	85.2	95.9		11.8
	Prodimamine	62.9	40.2	41.9		4.00
	Prometon	91.7	92.7	101		8.22
	Prometryn	93.9	96.1	101		4.97
	Pronamide	92.3	90.4	95.4		5.28
	Propanil	118	111	113		1.88
	Propargite	66.9	70.4	70.5		0.142
	Propiconazole	85.6	80.7	90.1		10.9
	Pyraflufen Ethyl	83.2	76.2	82.5		7.95
	Pyridaben	90.3	69.1	90.0		26.3
	Pyriproxyfen	83.3	86.0	85.9		0.0974
	Simazine	91.9	88.6	90.7		2.33
	Stirophos	66.6	69.5	59.6		15.4
	Sulfentrazone	73.4				1.06
	Tau-Fluvalinate	73.3	114	96.2		17.3
	Tebuconazole	55.5	66.2	52.7		22.7
	Terbufos	97.5	93.3	101		7.85
	Terbuthylazine	85.3	84.0	89.0		5.78
	Tetramethrin	85.7	125	109		13.3
	Thiobencarb	80.8	73.2	83.5		13.1
	Trans-Nonachlor	91.0	85.0	92.0		7.95
	Triadimefon	83.9	79.6	81.2		2.01

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Triclosan Methyl	86.8	78.5	89.7		13.3
	Trifluralin	80.2	75.6	80.4		6.10
EPA 8276	Chlordane	88.8	75.1	81.5		8.14
	Toxaphene	75.2	75.4	77.6		2.90
EPA 8321B	2,4-D	108	129	125		2.47
	2,4,5-T	76.9	97.4	114		15.4
	3-Hydroxycarbofuran	91.0	81.7	105		24.6
	Acesulfame K	106	66.1	66.0		0.166
	Acetaminophen	77.4	89.8	77.2		15.1
	Acetamiprid	92.8	97.5	87.0		11.4
	Afidopyropen	69.4	77.6	65.6		16.8
	Aldicarb	90.3	78.2	91.8		16.1
	Aldicarb Sulfone	97.2	94.7	100		5.84
	Aldicarb Sulfoxide	99.4	58.4	62.3		6.44
	AMPA	88.0	60.9	63.6		4.10
	Bentazon	38.8				1.31
	Benzovindiflupyr	91.3	107	86.3		21.5
	Carbamazepine	100	108	95.8		12.0
	Carbaryl	82.1	76.4	79.3		3.67
	Carbofuran	91.1	86.8	88.7		2.24
	Clothianidin	102	109	92.0		17.2
	Dinotefuran	106	143	117		20.0
	Diuron	88.0	87.0	77.6		11.4
	Endothall	95.0	140	108		25.5
	Fenuron	125	125	104		19.0
	Fluridone	108	121	108		11.0
	Glufosinate	99.4	83.7	89.1		6.29
	Glyphosate	87.9	68.6	75.6		8.08
	Hydrocodone	102	108	97.4		10.0
	Ibuprofen	90.5	87.3	73.7		16.9
	Imazapyr	105	119	91.5		13.8
	Imidacloprid	108	222	195		13.1
	Linuron	95.0	97.1	97.4		0.248
	Mandestrobin	99.6	112	100		11.3
	MCPP	122	135	135		0.504
	Methiocarb	53.6	57.6	60.4		4.75
	Methomyl	80.7	74.2	81.4		9.28
	Naproxen	83.1	82.2	73.1		11.7
	Oxamyl	67.2	71.3	73.4		2.84
	Primidone	77.4	114	84.6		29.4
	Propoxur	82.8	79.3	80.2		1.12
	Pyraclostrobin	87.4	108	90.9		17.4
	Silvex	77.6	106	116		9.36
	Sucralose	71.8	72.2	64.3		11.1
	Thiamethoxam	102	166	152		9.07
	Tolfenpyrad	46.5	65.7	55.4		17.1
	Triclopyr	79.0	104	100		3.32
SM 2320 B-2011	Total Alkalinity	98.2			0.0712	
	Total Alkalinity	96.8			0.209	
SM 2540 C-2011	TDS				2.00	
SM 4500 F-C-2011	Fluoride	99.0	98.4	98.4		0.0
	Fluoride	101	102	102		0.470
SM 5310 B-2011	Organic Carbon	95.2	97.2	99.4		1.51

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2307140, 2307143
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2307140, 2307143
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2307161, 2307162, 2307163, 2307164, 2307165
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2307161, 2307162, 2307163, 2307164, 2307165
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2307140, 2307143
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2307140, 2307143
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2307141, 2307144
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2307141, 2307144
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2307141, 2307144
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2307141, 2307144
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2307142, 2307145
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2307159
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2307160
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2307159
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2307156
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2307157, 2307158
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2307140, 2307143
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2307161, 2307162, 2307163, 2307164, 2307165
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2307140, 2307143
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2307140, 2307143
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2307140, 2307143
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2307141, 2307144

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/22/2022			02/22/2022 15:41	Samantha L Bates	2307140
	02/22/2022			02/22/2022 15:42	Samantha L Bates	2307143
EPA 180.1 Rev. 2.0	02/22/2022			02/22/2022 14:41	Khloe J Berg	2307140
	02/22/2022			02/22/2022 14:42	Khloe J Berg	2307143
EPA 200.7 Rev. 4.4	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 15:53	Josef B Mick	2307161
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 15:58	Josef B Mick	2307162
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 16:04	Josef B Mick	2307163
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 16:41	Josef B Mick	2307164
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 16:47	Josef B Mick	2307165
EPA 200.8 Rev. 5.4	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 23:11	McKinley C Carter	2307161
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 23:20	McKinley C Carter	2307162
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 23:29	McKinley C Carter	2307163
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/24/2022 23:38	McKinley C Carter	2307164
	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/25/2022 22:34	Alexander Thompson	2307165
EPA 300.0 Rev. 2.1	02/22/2022	02/24/2022 10:25	Megan Whitefoot	02/28/2022 13:39	Alexander Thompson	2307165
	02/22/2022			02/24/2022 17:44	Roberta Tatti	2307140
EPA 350.1 Rev. 2.0	02/22/2022			02/24/2022 17:56	Roberta Tatti	2307143
	02/22/2022			03/02/2022 10:38	Ping Hua	2307141
EPA 351.2 Rev. 2.0	02/22/2022	02/24/2022 12:59	Samantha L Bates	03/02/2022 10:52	Ping Hua	2307144
	02/22/2022	02/24/2022 12:59	Samantha L Bates	02/25/2022 15:17	Samantha L Bates	2307141
EPA 353.2 Rev. 2.0	02/22/2022			02/25/2022 15:19	Samantha L Bates	2307144
	02/22/2022			03/01/2022 10:14	Beverly Y. Sanders	2307141
EPA 365.1 Rev. 2.0	02/22/2022			03/01/2022 10:21	Beverly Y. Sanders	2307144
	02/22/2022	02/23/2022 15:05	Simonne.V. Calhoun	02/24/2022 14:44	Sarah A Nixon	2307141
EPA 365.1 Rev. 2.0 dissolved	02/22/2022	02/23/2022 15:05	Simonne.V. Calhoun	02/24/2022 14:45	Sarah A Nixon	2307144
	02/22/2022			02/22/2022 16:26	James L Waggeberby	2307142
EPA 8270E	02/22/2022			02/22/2022 16:27	James L Waggeberby	2307145
	02/22/2022	02/24/2022 08:00	Fe-Val Siddell	02/28/2022 19:31	Vandana T. Nagar	2307159
	02/22/2022	02/24/2022 08:00	Fe-Val Siddell	03/03/2022 01:03	Vandana T. Nagar	2307159
	02/22/2022	02/28/2022 08:00	Fe-Val Siddell	03/05/2022 02:13	Michael Poppell	2307160
	02/22/2022	02/28/2022 08:00	Fe-Val Siddell	03/09/2022 20:46	Michael Poppell	2307160
EPA 8276	02/22/2022	02/24/2022 08:00	Fe-Val Siddell	02/26/2022 10:52	Arthur Maknenko	2307159
EPA 8321B	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 11:41	Manjita Shrestha	2307157
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/23/2022 11:51	Manjita Shrestha	2307158
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/26/2022 07:06	Umesh Chiluwal	2307157
	02/22/2022	02/23/2022 09:00	Umesh Chiluwal	02/26/2022 07:21	Umesh Chiluwal	2307158
	02/22/2022	02/24/2022 09:00	June Rhew	02/26/2022 09:02	Juyoung Kim	2307157
	02/22/2022	02/24/2022 09:00	June Rhew	02/26/2022 09:37	Juyoung Kim	2307158
	02/22/2022	02/25/2022 09:00	June Rhew	02/25/2022 23:48	Juyoung Kim	2307156
	02/22/2022			02/28/2022 22:24	Dale L. Simmons	2307140
SM 2320 B-2011	02/22/2022					

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	02/22/2022			03/01/2022 06:13	Dale L. Simmons	2307143
SM 2340B	02/22/2022			02/28/2022 15:53	Josef B Mick	2307161
	02/22/2022			02/28/2022 15:58	Josef B Mick	2307162
	02/22/2022			02/28/2022 16:04	Josef B Mick	2307163
	02/22/2022			02/28/2022 16:41	Josef B Mick	2307164
	02/22/2022			02/28/2022 16:47	Josef B Mick	2307165
SM 2540 C-2011	02/22/2022			02/23/2022 15:49	Yijie Li	2307140, 2307143
SM 2540 D-2011	02/22/2022			02/23/2022 15:49	Yijie Li	2307140, 2307143
SM 4500 F-C-2011	02/22/2022			02/28/2022 22:24	Dale L. Simmons	2307140
	02/22/2022			03/01/2022 06:13	Dale L. Simmons	2307143
SM 5310 B-2011	02/22/2022			03/01/2022 20:00	Khloe J Berg	2307141
	02/22/2022			03/01/2022 20:30	Khloe J Berg	2307144