

Chemical Analysis Report

NW-DIST-2022-01-21-01

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

Event Description: **Laurel Hill West**
Request ID: **RQ-2022-01-17-37**
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

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

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 03-FEB-2022 10:08



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 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: Olive Branch Below Mormon Temple Road

Collection Date/Time: 01/20/2022 12:40

Field ID: G4NW0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301023	EPA 200.7 Rev. 4.4	Calcium	2.51		mg/L	P408836	
		Iron	640		ug/L	P408836	
		Magnesium	1.45		mg/L	P408836	
		Potassium	1.1	I	mg/L	P408836	
		Sodium	1.5	I	mg/L	P408836	
		Strontium	11.4		ug/L	P408836	
		Tin	3.0	U	ug/L	P408836	
		Titanium	4.2		ug/L	P408836	
		Vanadium	2.0	U	ug/L	P408836	
	EPA 200.8 Rev. 5.4	Zinc	11	I	ug/L	P408836	
		Aluminum	482		ug/L	P408836	
		Antimony	0.050	U	ug/L	P408836	
		Arsenic	0.41		ug/L	P408836	
		Barium	33.1		ug/L	P408836	
		Beryllium	0.157		ug/L	P408836	
		Boron**	10.7		ug/L	P408836	
		Cadmium	0.025	I	ug/L	P408836	
		Chromium	0.49	I	ug/L	P408836	
		Cobalt	1.94		ug/L	P408836	
		Copper	1.16		ug/L	P408836	
		Lead	0.73		ug/L	P408836	
		Manganese	74.9		ug/L	P408836	
		Molybdenum	0.15	U	ug/L	P408836	
		Nickel	1.9	I	ug/L	P408836	
		Selenium	0.20	U	ug/L	P408836	
		Silver	0.010	U	ug/L	P408836	
		Thallium	0.10	U	ug/L	P408836	
	SM 2340B	Hardness	12.2		mg/L	P408836	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 01/26/2022. The beryllium result was confirmed in the undigested sample on 01/27/2022.

Sample Location: Williams Creek West Fork Upstream of Antioch Rd. **Collection Date/Time: 01/20/2022 11:30**

Field ID: G4NW0489

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301020	EPA 8321B	2,4-D	0.0020	U	ug/L	P408897	
		Acesulfame K	0.10	U	ug/L	P408756	
		2,4,5-T	0.0040	U	ug/L	P408897	
		AMPA	0.10	U	ug/L	P408756	
		Acetaminophen	0.0080	U	ug/L	P408897	
		Acetamiprid	0.0020	U	ug/L	P408897	
		Endothall	0.25	U	ug/L	P408756	
		Glufosinate	0.10	U	ug/L	P408756	
		Glyphosate	0.10	U	ug/L	P408756	
		Afidopyropen	0.0020	U	ug/L	P408897	
		Bentazon	8.0E-04	U	ug/L	P408897	
		Sucralose	6.3		ug/L	P408756	
		Benzovindiflupyr	0.0020	U	ug/L	P408897	
		Carbamazepine	0.0038		ug/L	P408897	
		Clothianidin	0.0020	U	ug/L	P408897	
		Dinotefuran	0.0031	I	ug/L	P408897	
		Diuron	0.0020	U	ug/L	P408897	
		Fenuron	0.016	U	ug/L	P408897	
		Fluridone	8.0E-04	U	ug/L	P408897	
		Imazapyr	0.0040	U	ug/L	P408897	MS
		Hydrocodone	0.0020	U	ug/L	P408897	
		Ibuprofen	0.020	U	ug/L	P408897	
		Imidacloprid	0.0047	I	ug/L	P408897	MS
		Linuron	0.0040	U	ug/L	P408897	
		Mandestrobin	0.0020	U	ug/L	P408897	
		MCPP	0.0020	U	ug/L	P408897	
		Naproxen	0.0080	U	ug/L	P408897	
		Primidone	0.0054	I	ug/L	P408897	
		Pyraclostrobin	0.0020	U	ug/L	P408897	
		Silvex	0.0040	U	ug/L	P408897	
		Thiamethoxam	0.0020	U	ug/L	P408897	
		Tolfenpyrad	0.0020	U	ug/L	P408897	
		Triclopyr	0.0040	U	ug/L	P408897	

Sample Location: Oak Creek Below Tommy Steele Road

Collection Date/Time: 01/20/2022 12:20

Field ID: G4NW0395

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301024	EPA 200.7 Rev. 4.4	Calcium	1.33		mg/L	P408836	
		Iron	1.14E+03		ug/L	P408836	
		Magnesium	0.74		mg/L	P408836	
		Potassium	0.46	I	mg/L	P408836	
		Sodium	1.7	I	mg/L	P408836	
		Strontium	7.3	I	ug/L	P408836	
		Tin	3.0	U	ug/L	P408836	
		Titanium	2.3	I	ug/L	P408836	
		Vanadium	2.0	U	ug/L	P408836	
		Zinc	5.0	U	ug/L	P408836	
	EPA 200.8 Rev. 5.4	Aluminum	184		ug/L	P408836	
		Antimony	0.050	U	ug/L	P408836	
		Arsenic	0.36		ug/L	P408836	
		Barium	17.9		ug/L	P408836	
		Beryllium	0.092		ug/L	P408836	
		Boron**	6.8	I	ug/L	P408836	
		Cadmium	0.020	U	ug/L	P408836	
		Chromium	0.40	U	ug/L	P408836	
		Cobalt	0.775		ug/L	P408836	
		Copper	0.40	U	ug/L	P408836	
		Lead	0.37	I	ug/L	P408836	
		Manganese	52.7		ug/L	P408836	
		Molybdenum	0.15	U	ug/L	P408836	
		Nickel	0.81	I	ug/L	P408836	
		Selenium	0.20	U	ug/L	P408836	
		Silver	0.010	U	ug/L	P408836	
		Thallium	0.10	U	ug/L	P408836	
	SM 2340B	Hardness	6.4		mg/L	P408836	

Sample Location: Trammel Creek Above CRX train tracks

Collection Date/Time: 01/20/2022 11:10

Field ID: G4NW0383

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301025	EPA 200.7 Rev. 4.4	Calcium	6.25		mg/L	P408836	
		Iron	380		ug/L	P408836	
		Magnesium	1.27		mg/L	P408836	
		Potassium	1.7		mg/L	P408836	
		Sodium	4.5		mg/L	P408836	
		Strontium	29.2		ug/L	P408836	
		Tin	3.0	U	ug/L	P408836	
		Titanium	1.3	I	ug/L	P408836	
		Vanadium	2.0	U	ug/L	P408836	
		Zinc	5.0	U	ug/L	P408836	
	EPA 200.8 Rev. 5.4	Aluminum	121		ug/L	P408836	
		Antimony	0.050	U	ug/L	P408836	
		Arsenic	0.21		ug/L	P408836	
		Barium	13.6		ug/L	P408836	
		Beryllium	0.010	U	ug/L	P408836	
		Boron**	89.8		ug/L	P408836	
		Cadmium	0.020	U	ug/L	P408836	
		Chromium	0.40	U	ug/L	P408836	
		Cobalt	0.086		ug/L	P408836	
		Copper	0.40	U	ug/L	P408836	
	SM 2340B	Lead	0.32	I	ug/L	P408836	
		Manganese	10.1		ug/L	P408836	
		Molybdenum	0.15	U	ug/L	P408836	
		Nickel	0.50	U	ug/L	P408836	
		Selenium	0.20	U	ug/L	P408836	
		Silver	0.010	U	ug/L	P408836	
		Thallium	0.10	U	ug/L	P408836	
		Hardness	20.8		mg/L	P408836	

Sample Location: Wilkinson Creek Upstream of Wilkinson Bluff Road

Collection Date/Time: 01/20/2022 10:45

Field ID: G4NW0357

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301019	EPA 8321B	2,4-D	0.0020	U	ug/L	P408897	
		Acesulfame K	0.10	U	ug/L	P408756	
		2,4,5-T	0.0040	U	ug/L	P408897	
		AMPA	0.10	U	ug/L	P408756	
		Acetaminophen	0.0080	U	ug/L	P408897	
		Acetamiprid	0.0020	U	ug/L	P408897	
		Endothall	0.25	U	ug/L	P408756	
		Glufosinate	0.10	U	ug/L	P408756	
		Glyphosate	0.10	U	ug/L	P408756	
		Afidopyropen	0.0032	I	ug/L	P408897	
		Bentazon	8.0E-04	U	ug/L	P408897	
		Sucralose	0.14		ug/L	P408756	
		Benzovindiflupyr	0.0020	U	ug/L	P408897	
		Carbamazepine	8.9E-04	I	ug/L	P408897	
		Clothianidin	0.0020	U	ug/L	P408897	
		Dinotefuran	0.0020	U	ug/L	P408897	
		Diuron	0.0020	U	ug/L	P408897	
		Fenuron	0.016	U	ug/L	P408897	
		Fluridone	8.0E-04	U	ug/L	P408897	
		Imazapyr	0.0040	U	ug/L	P408897	MS
		Hydrocodone	0.0020	U	ug/L	P408897	
		Ibuprofen	0.020	U	ug/L	P408897	
		Imidacloprid	0.0055	I	ug/L	P408897	MS
		Linuron	0.0040	U	ug/L	P408897	
		Mandestrobin	0.0020	U	ug/L	P408897	
		MCPP	0.0020	U	ug/L	P408897	
		Naproxen	0.0080	U	ug/L	P408897	
		Primidone	0.0040	U	ug/L	P408897	
		Pyraclostrobin	0.0020	U	ug/L	P408897	
		Silvex	0.0040	U	ug/L	P408897	
		Thiamethoxam	0.0020	U	ug/L	P408897	
		Tolfenpyrad	0.0020	U	ug/L	P408897	
		Triclopyr	0.0040	U	ug/L	P408897	

Sample Location: Baggett Creek Upstream of Hwy 90

Collection Date/Time: 01/20/2022 10:20

Field ID: G4NW0336

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301015	EPA 8270E	Aldrin	0.69	U	ng/L	P408962	
		Alpha-BHC	0.11	U	ng/L	P408962	
		Alpha-Chlordane	0.21	U	ng/L	P408962	
		Beta-BHC	0.11	U	ng/L	P408962	
		Beta-Cyfluthrin**	1.3	U	ng/L	P408962	
		Bifenthrin**	0.53	U	ng/L	P408962	
		Carbophenothion	0.95	U	ng/L	P408962	
		Chlorothalonil	1.3	U	ng/L	P408962	
		Cis-Nonachlor**	0.21	U	ng/L	P408962	
		Cypermethrin	1.6	U	ng/L	P408962	
		Dacthal**	0.16	U	ng/L	P408962	
		DDD-p,p'	0.26	U	ng/L	P408962	
		DDE-p,p'	0.21	U	ng/L	P408962	
		DDT-p,p'	0.26	U	ng/L	P408962	
		Delta-BHC	0.42	U	ng/L	P408962	
		Deltamethrin**	1.3	U	ng/L	P408962	
		Dichlobenil**	0.26	U	ng/L	P408962	
		Dicofol	1.3	U	ng/L	P408962	
		Dieldrin	0.42	U	ng/L	P408962	
		Endosulfan I	0.42	U	ng/L	P408962	
		Endosulfan II	0.42	U	ng/L	P408962	
		Endosulfan Sulfate	0.32	U	ng/L	P408962	
		Endrin	0.42	U	ng/L	P408962	
		Endrin Aldehyde	0.79	U	ng/L	P408962	
		Endrin Ketone	0.42	U	ng/L	P408962	
		Esfenvalerate**	0.79	U	ng/L	P408962	
		Ethalfuralin**	0.16	U	ng/L	P408962	
		Fenpropathrin**	0.26	U	ng/L	P408962	
		Gamma-BHC	0.13	U	ng/L	P408962	
		Gamma-Chlordane	0.21	U	ng/L	P408962	
		Heptachlor	0.21	U	ng/L	P408962	
		Heptachlor Epoxide	0.26	U	ng/L	P408962	
		Hexachlorobenzene	1.1	U	ng/L	P408962	
		Kepone**	5.3	UJ	ng/L	P408962	CCV
		Lambda-Cyhalothrin**	0.79	U	ng/L	P408962	
		Methoprene**	0.79	U	ng/L	P408962	
		Methoxychlor	0.32	U	ng/L	P408962	
		MGK-264**	0.21	U	ng/L	P408962	
		Mirex	0.74	U	ng/L	P408962	
		Oxychlordane**	0.32	U	ng/L	P408962	MS
		Permethrin	1.7	U	ng/L	P408962	
		Phenothrin**	0.95	U	ng/L	P408962	
		Piperonyl Butoxide**	0.16	U	ng/L	P408962	
		Prallethrin**	2.1	U	ng/L	P408962	

Field ID: G4NW0336

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301015	EPA 8270E	Tau-Fluvalinate**	0.26	U	ng/L	P408962	
		Tetramethrin**	0.79	U	ng/L	P408962	
		Trans-Nonachlor**	0.21	U	ng/L	P408962	
		Triclosan Methyl**	0.16	U	ng/L	P408962	
		Trifluralin	0.21	U	ng/L	P408962	
	EPA 8276	Chlordane	2.6	U	ng/L	P408962	
		Toxaphene	16	U	ng/L	P408962	
2301017	EPA 8321B	2,4-D	0.0020	U	ug/L	P408897	
		Acesulfame K	0.10	U	ug/L	P408756	
		2,4,5-T	0.0040	U	ug/L	P408897	
		AMPA	0.10	U	ug/L	P408756	
		Acetaminophen	0.0080	U	ug/L	P408897	
		Acetamiprid	0.0020	U	ug/L	P408897	
		Endothall	0.25	U	ug/L	P408756	
		Glufosinate	0.10	U	ug/L	P408756	
		Glyphosate	0.10	U	ug/L	P408756	
		Afidopyropen	0.0020	U	ug/L	P408897	
		Bentazon	0.0012	I	ug/L	P408897	
		Sucralose	0.15		ug/L	P408756	
		Benzovindiflupyr	0.0020	U	ug/L	P408897	
		Carbamazepine	8.0E-04	U	ug/L	P408897	
		Clothianidin	0.0020	U	ug/L	P408897	
		Dinotefuran	0.0020	U	ug/L	P408897	
		Diuron	0.0020	U	ug/L	P408897	
		Fenuron	0.016	U	ug/L	P408897	
		Fluridone	8.0E-04	U	ug/L	P408897	
		Imazapyr	0.0040	U	ug/L	P408897	MS
		Hydrocodone	0.0020	U	ug/L	P408897	
		Ibuprofen	0.020	U	ug/L	P408897	
		Imidacloprid	0.0040	I	ug/L	P408897	MS
		Linuron	0.0040	U	ug/L	P408897	
		Mandestrobin	0.0020	U	ug/L	P408897	
		MCPP	0.0020	U	ug/L	P408897	
		Naproxen	0.0080	U	ug/L	P408897	
		Primidone	0.0040	U	ug/L	P408897	
		Pyraclostrobin	0.0020	U	ug/L	P408897	
		Silvex	0.0040	U	ug/L	P408897	
		Thiamethoxam	0.0020	U	ug/L	P408897	
		Tolfenpyrad	0.0020	U	ug/L	P408897	
		Triclopyr	0.0040	U	ug/L	P408897	
2301021	EPA 200.7 Rev. 4.4	Calcium	2.10		mg/L	P408836	
		Iron	440		ug/L	P408836	
		Magnesium	1.23		mg/L	P408836	
		Potassium	0.52	I	mg/L	P408836	
		Sodium	2.3		mg/L	P408836	

Field ID: G4NW0336

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301021	EPA 200.7 Rev. 4.4	Strontium	10.8		ug/L	P408836	
		Tin	3.0	U	ug/L	P408836	
		Titanium	2.1	I	ug/L	P408836	
		Vanadium	2.0	U	ug/L	P408836	
		Zinc	5.0	U	ug/L	P408836	
	EPA 200.8 Rev. 5.4	Aluminum	108		ug/L	P408836	
		Antimony	0.050	U	ug/L	P408836	
		Arsenic	0.20	I	ug/L	P408836	
		Barium	23.9		ug/L	P408836	
		Beryllium	0.010	U	ug/L	P408836	
		Boron**	10.5		ug/L	P408836	
		Cadmium	0.020	U	ug/L	P408836	
		Chromium	0.40	U	ug/L	P408836	
		Cobalt	0.112		ug/L	P408836	
		Copper	0.40	U	ug/L	P408836	
		Lead	0.20	U	ug/L	P408836	
		Manganese	8.12		ug/L	P408836	
		Molybdenum	0.15	U	ug/L	P408836	
		Nickel	0.50	U	ug/L	P408836	
		Selenium	0.20	U	ug/L	P408836	
		Silver	0.010	U	ug/L	P408836	
		Thallium	0.10	U	ug/L	P408836	
	SM 2340B	Hardness	10.3		mg/L	P408836	

Ref. Method and Comment:
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Baggett Creek Upstream of Keyser Mill Road

Collection Date/Time: 01/20/2022 10:00

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301016	EPA 8270E	Aldrin	0.69	U	ng/L	P408962	
		Alpha-BHC	0.11	U	ng/L	P408962	
		Alpha-Chlordane	0.21	U	ng/L	P408962	
		Beta-BHC	0.11	U	ng/L	P408962	
		Beta-Cyfluthrin**	1.3	U	ng/L	P408962	
		Bifenthrin**	0.53	U	ng/L	P408962	
		Carbophenothion	0.96	U	ng/L	P408962	
		Chlorothalonil	1.3	U	ng/L	P408962	
		Cis-Nonachlor**	0.21	U	ng/L	P408962	
		Cypermethrin	1.6	U	ng/L	P408962	
		Dacthal**	0.16	U	ng/L	P408962	
		DDD-p,p'	0.27	U	ng/L	P408962	
		DDE-p,p'	0.21	U	ng/L	P408962	
		DDT-p,p'	0.27	U	ng/L	P408962	
		Delta-BHC	0.42	U	ng/L	P408962	
		Deltamethrin**	1.3	U	ng/L	P408962	
		Dichlobenil**	0.27	U	ng/L	P408962	
		Dicofol	1.3	U	ng/L	P408962	
		Dieldrin	0.91	I	ng/L	P408962	
		Endosulfan I	0.42	U	ng/L	P408962	
		Endosulfan II	0.42	U	ng/L	P408962	
		Endosulfan Sulfate	0.32	U	ng/L	P408962	
		Endrin	0.42	U	ng/L	P408962	
		Endrin Aldehyde	0.80	U	ng/L	P408962	
		Endrin Ketone	0.42	U	ng/L	P408962	
		Esfenvalerate**	0.80	U	ng/L	P408962	
		Ethalfuralin**	0.16	U	ng/L	P408962	
		Fenpropathrin**	0.27	U	ng/L	P408962	
		Gamma-BHC	0.13	U	ng/L	P408962	
		Gamma-Chlordane	0.23	I	ng/L	P408962	
		Heptachlor	0.21	U	ng/L	P408962	
		Heptachlor Epoxide	0.27	U	ng/L	P408962	
		Hexachlorobenzene	1.1	U	ng/L	P408962	
		Kepone**	5.3	UJ	ng/L	P408962	CCV
		Lambda-Cyhalothrin**	0.80	U	ng/L	P408962	
		Methoprene**	0.80	U	ng/L	P408962	
		Methoxychlor	0.32	U	ng/L	P408962	
		MGK-264**	0.21	U	ng/L	P408962	
		Mirex	0.74	U	ng/L	P408962	
		Oxychlordane**	0.32	U	ng/L	P408962	MS
		Permethrin	1.7	U	ng/L	P408962	
		Phenothrin**	0.96	U	ng/L	P408962	
		Piperonyl Butoxide**	0.16	U	ng/L	P408962	
		Prallethrin**	2.1	U	ng/L	P408962	

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301016	EPA 8270E	Tau-Fluvalinate**	0.27	U	ng/L	P408962	
		Tetramethrin**	0.80	U	ng/L	P408962	
		Trans-Nonachlor**	0.21	U	ng/L	P408962	
		Triclosan Methyl**	0.16	U	ng/L	P408962	
		Trifluralin	0.21	U	ng/L	P408962	
	EPA 8276	Chlordane	2.7	U	ng/L	P408962	
		Toxaphene	16	U	ng/L	P408962	
2301018	EPA 8321B	2,4-D	0.0020	U	ug/L	P408897	
		Acesulfame K	0.10	U	ug/L	P408756	
		2,4,5-T	0.0040	U	ug/L	P408897	
		AMPA	0.10	U	ug/L	P408756	
		Acetaminophen	0.0080	U	ug/L	P408897	
		Acetamiprid	0.0020	U	ug/L	P408897	
		Endothall	0.25	U	ug/L	P408756	
		Glufosinate	0.10	U	ug/L	P408756	
		Glyphosate	0.10	U	ug/L	P408756	
		Afidopyropen	0.0020	U	ug/L	P408897	
		Bentazon	0.0022	I	ug/L	P408897	
		Sucralose	0.13		ug/L	P408756	
		Benzovindiflupyr	0.0020	U	ug/L	P408897	
		Carbamazepine	8.0E-04	U	ug/L	P408897	
		Clothianidin	0.0020	U	ug/L	P408897	
		Dinotefuran	0.0020	U	ug/L	P408897	
		Diuron	0.0020	U	ug/L	P408897	
		Fenuron	0.016	U	ug/L	P408897	
		Fluridone	8.0E-04	U	ug/L	P408897	
		Imazapyr	0.0040	U	ug/L	P408897	MS
		Hydrocodone	0.0020	U	ug/L	P408897	
		Ibuprofen	0.020	U	ug/L	P408897	
		Imidacloprid	0.0046	I	ug/L	P408897	MS
		Linuron	0.0040	U	ug/L	P408897	
		Mandestrobin	0.0020	U	ug/L	P408897	
		MCPP	0.0020	U	ug/L	P408897	
		Naproxen	0.0080	U	ug/L	P408897	
		Primidone	0.0040	U	ug/L	P408897	
		Pyraclostrobin	0.0020	U	ug/L	P408897	
		Silvex	0.0040	U	ug/L	P408897	
		Thiamethoxam	0.0020	U	ug/L	P408897	
		Tolfenpyrad	0.0020	U	ug/L	P408897	
		Triclopyr	0.0040	U	ug/L	P408897	
2301022	EPA 200.7 Rev. 4.4	Calcium	1.18		mg/L	P408836	
		Iron	600		ug/L	P408836	
		Magnesium	1.22		mg/L	P408836	
		Potassium	0.63	I	mg/L	P408836	
		Sodium	2.2		mg/L	P408836	

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301022	EPA 200.7 Rev. 4.4	Strontium	12.0		ug/L	P408836	
		Tin	3.0	U	ug/L	P408836	
		Titanium	1.1	I	ug/L	P408836	
		Vanadium	2.0	U	ug/L	P408836	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P408836	
		Aluminum	70		ug/L	P408836	
		Antimony	0.050	U	ug/L	P408836	
		Arsenic	0.19	I	ug/L	P408836	
		Barium	36.1		ug/L	P408836	
		Beryllium	0.013	I	ug/L	P408836	
		Boron**	9.1		ug/L	P408836	
		Cadmium	0.020	U	ug/L	P408836	
		Chromium	0.40	U	ug/L	P408836	
		Cobalt	0.245		ug/L	P408836	
		Copper	0.40	U	ug/L	P408836	
		Lead	0.20	U	ug/L	P408836	
		Manganese	11.3		ug/L	P408836	
		Molybdenum	0.15	U	ug/L	P408836	
		Nickel	0.50	U	ug/L	P408836	
		Selenium	0.20	U	ug/L	P408836	
		Silver	0.010	U	ug/L	P408836	
		Thallium	0.10	U	ug/L	P408836	
	SM 2340B	Hardness	8.0		mg/L	P408836	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408836

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: P408836

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 8270E

Batch ID: P408962

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
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408962

Component	Result	Code	Units
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408962

Component	Result	Code	Units
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
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 8276

Batch ID: P408962

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: P408756

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P408897

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	107		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Strontium	106		P	85 - 115
Tin	109		P	85 - 115
Titanium	109		P	85 - 115
Vanadium	108		P	85 - 115
Zinc	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	101		P	85 - 115
Barium	105		P	85 - 115
Beryllium	97.8		P	85 - 115
Boron	98.9		P	85 - 115
Cadmium	99.8		P	85 - 115
Chromium	99.9		P	85 - 115
Cobalt	101		P	85 - 115
Copper	99.7		P	85 - 115
Lead	98.9		P	85 - 115
Manganese	98.2		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	101		P	85 - 115
Selenium	98.5		P	85 - 115
Silver	104		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 8270E

Batch ID: P408962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	55.1		P	10 - 93.0
Alpha-BHC	92.8		P	75 - 106
Alpha-Chlordane	79.8		P	50 - 109
Beta-BHC	107		P	65 - 135
Beta-Cyfluthrin	84.1		P	23 - 167
Bifenthrin	68.1		P	11 - 123
Carbophenothion	55.9		P	18 - 96.0
Chlorothalonil	120		P	26 - 182
Cis-Nonachlor	64.7		P	40 - 111
Cypermethrin	87.9		P	25 - 155
Dacthal	88.9		P	73 - 112
DDD-p,p'	74.6		P	47 - 108
DDE-p,p'	73.2		P	48 - 107
DDT-p,p'	77.1		P	49 - 111
Delta-BHC	105		P	68 - 143

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P408962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Deltamethrin	96.4		P	16 - 176
Dichlobenil	84.2		P	32 - 113
Dicofol	75.8		P	50 - 108
Dieldrin	76.9		P	56 - 110
Endosulfan I	73.6		P	60 - 105
Endosulfan II	75.1		P	50 - 120
Endosulfan Sulfate	91.8		P	55 - 121
Endrin	63.7		P	35 - 117
Endrin Aldehyde	73.0		P	36 - 116
Endrin Ketone	101		P	56 - 130
Esfenvalerate	80.9		P	10 - 179
Ethalfuralin	77.1		P	49 - 99.0
Fenpropathrin	85.2		P	35 - 119
Gamma-BHC	104		P	72 - 115
Gamma-Chlordane	77.4		P	45 - 107
Heptachlor	70.1		P	41 - 100
Heptachlor Epoxide	84.3		P	58 - 106
Hexachlorobenzene	76.1		P	39 - 100
Kepone	127		P	10 - 191
Lambda-Cyhalothrin	86.7		P	10 - 186
Methoprene	60.1		P	10 - 129
Methoxychlor	94.1		P	61 - 111
MGK-264	75.9		P	20 - 123
Mirex	58.8		P	10 - 182
Oxychlordane	68.5		P	39 - 110
Permethrin	90.8		P	26 - 152
Phenothrin	64.2		P	10 - 109
Piperonyl Butoxide	88.0		P	27 - 142
Prallethrin	64.2		P	14 - 109
Tau-Fluvalinate	74.8		P	16 - 134
Tetramethrin	80.4		P	10 - 125
Trans-Nonachlor	75.0		P	45 - 107
Triclosan Methyl	73.7		P	60 - 110
Trifluralin	78.7		P	49 - 98.0

Reference Method: EPA 8276

Batch ID: P408962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.6		P	61 - 118
Toxaphene	76.5		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P408756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	91.4		P	40 - 150
Endothall	115		P	40 - 150
Glufosinate	95.7		P	40 - 150
Glyphosate	90.3		P	40 - 150
Sucralose	86.1		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P408897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	94.2		P	30 - 160
2,4,5-T	92.0		P	30 - 160
Acetaminophen	61.6		P	30 - 160
Acetamiprid	95.6		P	30 - 160
Afidopyropen	78.2		P	30 - 160
Bentazon	92.9		P	30 - 160
Benzovindiflupyr	96.4		P	30 - 160
Carbamazepine	99.8		P	30 - 160
Clothianidin	103		P	30 - 160
Dinotefuran	105		P	30 - 160
Diuron	98.6		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	113		P	30 - 160
Hydrocodone	98.6		P	30 - 160
Ibuprofen	92.1		P	30 - 160
Imazapyr	110		P	30 - 160
Imidacloprid	95.7		P	30 - 160
Linuron	82.7		P	30 - 160
Mandestrobin	98.6		P	30 - 160
MCPP	120		P	30 - 160
Naproxen	114		P	30 - 160
Primidone	95.9		P	30 - 160
Pyraclostrobin	89.7		P	30 - 160
Silvex	70.5		P	30 - 160
Thiamethoxam	101		P	30 - 160
Tolfenpyrad	44.8		P	30 - 160
Triclopyr	90.4		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300783	Calcium	103		P	80 - 120
2300783	Iron	106		P	80 - 120
2300783	Magnesium	107		P	80 - 120
2300783	Potassium	107		P	80 - 120
2300783	Sodium	101		P	80 - 120
2300783	Strontium	106		P	80 - 120
2300783	Tin	109		P	80 - 120
2300783	Titanium	108		P	80 - 120
2300783	Vanadium	107		P	80 - 120
2300783	Zinc	108		P	80 - 120
2301176	Calcium	103		P	80 - 120
2301176	Iron	109	107	P/P	80 - 120
2301176	Magnesium	108	107	P/P	80 - 120
2301176	Potassium	103	102	P/P	80 - 120
2301176	Sodium	99.2		P	80 - 120
2301176	Strontium	105	105	P/P	80 - 120
2301176	Tin	110	109	P/P	80 - 120
2301176	Titanium	110	107	P/P	80 - 120
2301176	Vanadium	109	106	P/P	80 - 120
2301176	Zinc	109	106	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300783	Aluminum	101		P	80 - 120
2300783	Antimony	103		P	80 - 120
2300783	Arsenic	102		P	80 - 120
2300783	Barium	107		P	80 - 120
2300783	Beryllium	99.3		P	80 - 120
2300783	Boron	98.2		P	80 - 120
2300783	Cadmium	102		P	80 - 120
2300783	Chromium	102		P	80 - 120
2300783	Cobalt	101		P	80 - 120
2300783	Copper	101		P	80 - 120
2300783	Lead	101		P	80 - 120
2300783	Manganese	99.0		P	80 - 120
2300783	Molybdenum	102		P	80 - 120
2300783	Nickel	101		P	80 - 120
2300783	Selenium	99.9		P	80 - 120
2300783	Silver	104		P	80 - 120
2300783	Thallium	108		P	80 - 120
2301176	Aluminum	99.6	101	P/P	80 - 120
2301176	Antimony	103	105	P/P	80 - 120
2301176	Arsenic	100	102	P/P	80 - 120
2301176	Barium	104	107	P/P	80 - 120
2301176	Beryllium	95.7	99.6	P/P	80 - 120
2301176	Boron	96.3	98.0	P/P	80 - 120
2301176	Cadmium	101	103	P/P	80 - 120
2301176	Chromium	100	102	P/P	80 - 120
2301176	Cobalt	100	101	P/P	80 - 120
2301176	Copper	98.8	99.1	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301176	Lead	98.2	101	P/P	80 - 120
2301176	Manganese	97.8	99.1	P/P	80 - 120
2301176	Molybdenum	103	105	P/P	80 - 120
2301176	Nickel	100	101	P/P	80 - 120
2301176	Selenium	97.1	97.8	P/P	80 - 120
2301176	Silver	102	104	P/P	80 - 120
2301176	Thallium	104	108	P/P	80 - 120

Reference Method: EPA 8270E
Batch ID: P408962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301219	Aldrin	56.4	59.1	P/P	10 - 89.0
2301219	Alpha-BHC	96.4	95.3	P/P	71 - 105
2301219	Alpha-Chlordane	76.4	78.1	P/P	43 - 107
2301219	Beta-BHC	103	103	P/P	57 - 152
2301219	Beta-Cyfluthrin	89.5	89.3	P/P	29 - 186
2301219	Bifenthrin	78.9	83.6	P/P	19 - 119
2301219	Carbophenothion	59.1	60.3	P/P	19 - 107
2301219	Chlorothalonil	212	199	P/P	10 - 245
2301219	Cis-Nonachlor	63.3	64.9	P/P	36 - 110
2301219	Cypermethrin	84.7	74.4	P/P	24 - 169
2301219	Dacthal	84.8	88.8	P/P	62 - 115
2301219	DDD-p,p'	70.9	73.8	P/P	36 - 109
2301219	DDE-p,p'	67.4	70.4	P/P	30 - 114
2301219	DDT-p,p'	82.3	83.4	P/P	42 - 108
2301219	Delta-BHC	111	107	P/P	60 - 164
2301219	Deltamethrin	107	110	P/P	10 - 210
2301219	Dichlobenil	85.8	85.2	P/P	23 - 108
2301219	Dicofol	79.3	79.2	P/P	44 - 109
2301219	Dieldrin	68.1	71.4	P/P	37 - 119
2301219	Endosulfan I	73.5	77.6	P/P	52 - 105
2301219	Endosulfan II	65.5	65.5	P/P	35 - 127
2301219	Endosulfan Sulfate	82.6	83.1	P/P	39 - 130
2301219	Endrin	67.4	68.7	P/P	30 - 116
2301219	Endrin Aldehyde	47.6	41.2	P/P	20 - 110
2301219	Endrin Ketone	89.5	96.3	P/P	48 - 134
2301219	Esfenvalerate	91.5	92.6	P/P	10 - 199
2301219	Ethalfuralin	83.3	84.5	P/P	48 - 95.0
2301219	Fenpropathrin	85.8	88.8	P/P	37 - 121
2301219	Gamma-BHC	106	103	P/P	61 - 126
2301219	Gamma-Chlordane	74.0	77.9	P/P	39 - 105
2301219	Heptachlor	70.6	73.2	P/P	38 - 96.0
2301219	Heptachlor Epoxide	80.5	83.6	P/P	42 - 114
2301219	Hexachlorobenzene	88.0	85.6	P/P	39 - 93.0
2301219	Kepone	78.6	59.6	P/P	10 - 215
2301219	Lambda-Cyhalothrin	103	101	P/P	10 - 204
2301219	Methoprene	63.1	65.7	P/P	17 - 108
2301219	Methoxychlor	104	102	P/P	56 - 115
2301219	MGK-264	75.5	77.9	P/P	35 - 120
2301219	Mirex	57.0	59.1	P/P	10 - 178
2301219	Oxychlordane	82.0	96.9	P/F	47 - 91.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P408962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301219	Permethrin	128	96.0	P/P	27 - 170
2301219	Phenothrin	79.7	79.9	P/P	10 - 133
2301219	Piperonyl Butoxide	95.1	97.8	P/P	23 - 150
2301219	Prallethrin	70.2	62.1	P/P	21 - 113
2301219	Tau-Fluvalinate	82.3	84.3	P/P	16 - 158
2301219	Tetramethrin	109	107	P/P	22 - 132
2301219	Trans-Nonachlor	72.4	70.6	P/P	43 - 102
2301219	Triclosan Methyl	67.6	71.8	P/P	49 - 109
2301219	Trifluralin	85.2	85.0	P/P	48 - 93.0

Reference Method: EPA 8276

Batch ID: P408962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301016	Chlordane	77.4	70.4	P/P	55 - 128
2301016	Toxaphene	83.3	72.0	P/P	57 - 211

Reference Method: EPA 8321B

Batch ID: P408756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300832	Acesulfame K	130	141	P/P	40 - 150
2300832	AMPA	71.5	72.6	P/P	40 - 150
2300832	Endothall	96.5	101	P/P	40 - 150
2300832	Glufosinate	76.8	76.8	P/P	40 - 150
2300832	Glyphosate	73.5	73.5	P/P	40 - 150
2300832	Sucralose	84.2	88.7	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P408897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300987	2,4-D	128	140	P/P	30 - 160
2300987	2,4,5-T	107	135	P/P	30 - 160
2300987	Acetaminophen	85.7	85.5	P/P	30 - 160
2300987	Acetamiprid	114	100	P/P	30 - 160
2300987	Afidopyropen	78.6	65.4	P/P	30 - 160
2300987	Bentazon	78.4	76.1	P/P	30 - 160
2300987	Benzovindiflupyr	103	107	P/P	30 - 160
2300987	Carbamazepine	113	122	P/P	30 - 160
2300987	Clothianidin	140	147	P/P	30 - 160
2300987	Dinotefuran	131	135	P/P	30 - 160
2300987	Diuron	87.5	86.0	P/P	30 - 160
2300987	Fenuron	92.7	99.6	P/P	30 - 160
2300987	Fluridone	97.4	113	P/P	30 - 160
2300987	Hydrocodone	113	120	P/P	30 - 160
2300987	Ibuprofen	91.9	85.2	P/P	30 - 160
2300987	Imazapyr	198	202	F/F	30 - 160
2300987	Imidacloprid	182	188	F/F	30 - 160
2300987	Linuron	79.0	74.7	P/P	30 - 160
2300987	Mandestrobin	103	107	P/P	30 - 160
2300987	MCPP	145	147	P/P	30 - 160

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P408897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300987	Naproxen	87.4	114	P/P	30 - 160
2300987	Primidone	116	115	P/P	30 - 160
2300987	Pyraclostrobin	101	106	P/P	30 - 160
2300987	Silvex	89.1	110	P/P	30 - 160
2300987	Thiamethoxam	153	156	P/P	30 - 160
2300987	Tolfenpyrad	63.6	67.3	P/P	30 - 160
2300987	Triclopyr	114	138	P/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301176	Calcium	0.170	Spike	P	0 - 20
2301176	Iron	1.14	Spike	P	0 - 20
2301176	Magnesium	1.02	Spike	P	0 - 20
2301176	Potassium	0.696	Spike	P	0 - 20
2301176	Sodium	0.0551	Spike	P	0 - 20
2301176	Strontium	0.119	Spike	P	0 - 20
2301176	Tin	0.951	Spike	P	0 - 20
2301176	Titanium	2.50	Spike	P	0 - 20
2301176	Vanadium	2.22	Spike	P	0 - 20
2301176	Zinc	2.90	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301176	Aluminum	1.11	Spike	P	0 - 20
2301176	Antimony	2.28	Spike	P	0 - 20
2301176	Arsenic	1.72	Spike	P	0 - 20
2301176	Barium	2.50	Spike	P	0 - 20
2301176	Beryllium	3.87	Spike	P	0 - 20
2301176	Boron	1.56	Spike	P	0 - 20
2301176	Cadmium	1.64	Spike	P	0 - 20
2301176	Chromium	1.90	Spike	P	0 - 20
2301176	Cobalt	1.20	Spike	P	0 - 20
2301176	Copper	0.308	Spike	P	0 - 20
2301176	Lead	2.41	Spike	P	0 - 20
2301176	Manganese	1.10	Spike	P	0 - 20
2301176	Molybdenum	1.77	Spike	P	0 - 20
2301176	Nickel	0.549	Spike	P	0 - 20
2301176	Selenium	0.727	Spike	P	0 - 20
2301176	Silver	1.96	Spike	P	0 - 20
2301176	Thallium	3.70	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P408962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301219	Aldrin	4.77	Spike	P	0 - 37
2301219	Alpha-BHC	1.05	Spike	P	0 - 16
2301219	Alpha-Chlordane	2.10	Spike	P	0 - 28
2301219	Beta-BHC	0.646	Spike	P	0 - 32
2301219	Beta-Cyfluthrin	0.199	Spike	P	0 - 41
2301219	Bifenthrin	5.82	Spike	P	0 - 36
2301219	Carbophenothion	1.99	Spike	P	0 - 81
2301219	Chlorothalonil	5.87	Spike	P	0 - 54
2301219	Cis-Nonachlor	2.47	Spike	P	0 - 33
2301219	Cypermethrin	12.9	Spike	P	0 - 38
2301219	Dacthal	4.57	Spike	P	0 - 23
2301219	DDD-p,p'	3.99	Spike	P	0 - 35

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P408962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301219	DDE-p,p'	4.37	Spike	P	0 - 27
2301219	DDT-p,p'	1.29	Spike	P	0 - 31
2301219	Delta-BHC	3.09	Spike	P	0 - 30
2301219	Deltamethrin	2.24	Spike	P	0 - 76
2301219	Dichlobenil	0.604	Spike	P	0 - 33
2301219	Dicofol	0.233	Spike	P	0 - 24
2301219	Dieldrin	4.53	Spike	P	0 - 35
2301219	Endosulfan I	5.36	Spike	P	0 - 25
2301219	Endosulfan II	0.0376	Spike	P	0 - 31
2301219	Endosulfan Sulfate	0.551	Spike	P	0 - 38
2301219	Endrin	2.02	Spike	P	0 - 53
2301219	Endrin Aldehyde	14.5	Spike	P	0 - 81
2301219	Endrin Ketone	7.36	Spike	P	0 - 33
2301219	Esfenvalerate	1.19	Spike	P	0 - 46
2301219	Ethalfuralin	1.40	Spike	P	0 - 22
2301219	Fenpropathrin	3.53	Spike	P	0 - 29
2301219	Gamma-BHC	3.25	Spike	P	0 - 17
2301219	Gamma-Chlordane	5.12	Spike	P	0 - 28
2301219	Heptachlor	3.55	Spike	P	0 - 28
2301219	Heptachlor Epoxide	3.70	Spike	P	0 - 23
2301219	Hexachlorobenzene	2.81	Spike	P	0 - 22
2301219	Kepone	10.5	Spike	P	0 - 61
2301219	Lambda-Cyhalothrin	1.53	Spike	P	0 - 52
2301219	Methoprene	4.07	Spike	P	0 - 38
2301219	Methoxychlor	1.64	Spike	P	0 - 29
2301219	MGK-264	3.13	Spike	P	0 - 41
2301219	Mirex	3.69	Spike	P	0 - 39
2301219	Oxychlordane	16.7	Spike	P	0 - 33
2301219	Permethrin	28.6	Spike	P	0 - 39
2301219	Phenothrin	0.197	Spike	P	0 - 52
2301219	Piperonyl Butoxide	2.78	Spike	P	0 - 91
2301219	Prallethrin	12.3	Spike	P	0 - 34
2301219	Tau-Fluvalinate	2.34	Spike	P	0 - 41
2301219	Tetramethrin	1.84	Spike	P	0 - 43
2301219	Trans-Nonachlor	2.60	Spike	P	0 - 31
2301219	Triclosan Methyl	6.08	Spike	P	0 - 24
2301219	Trifluralin	0.278	Spike	P	0 - 23

Reference Method: EPA 8276
Batch ID: P408962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301016	Chlordane	9.44	Spike	P	0 - 25
2301016	Toxaphene	14.6	Spike	P	0 - 24

Reference Method: EPA 8321B
Batch ID: P408756

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

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300832	Acesulfame K	8.14	Spike	P	0 - 30
2300832	AMPA	1.10	Spike	P	0 - 30
2300832	Endothall	4.55	Spike	P	0 - 30
2300832	Glufosinate	0.0479	Spike	P	0 - 30
2300832	Glyphosate	0.0447	Spike	P	0 - 30
2300832	Sucralose	4.88	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300987	2,4-D	8.72	Spike	P	0 - 30
2300987	2,4,5-T	22.8	Spike	P	0 - 30
2300987	Acetaminophen	0.257	Spike	P	0 - 30
2300987	Acetamiprid	13.2	Spike	P	0 - 30
2300987	Afidopyropen	18.3	Spike	P	0 - 30
2300987	Bentazon	2.93	Spike	P	0 - 30
2300987	Benzovindiflupyr	4.28	Spike	P	0 - 30
2300987	Carbamazepine	7.46	Spike	P	0 - 30
2300987	Clothianidin	4.69	Spike	P	0 - 30
2300987	Dinotefuran	3.31	Spike	P	0 - 30
2300987	Diuron	1.72	Spike	P	0 - 30
2300987	Fenuron	7.20	Spike	P	0 - 30
2300987	Fluridone	14.8	Spike	P	0 - 30
2300987	Hydrocodone	5.84	Spike	P	0 - 30
2300987	Ibuprofen	7.57	Spike	P	0 - 30
2300987	Imazapyr	1.95	Spike	P	0 - 30
2300987	Imidacloprid	3.51	Spike	P	0 - 30
2300987	Linuron	5.60	Spike	P	0 - 30
2300987	Mandestrobin	3.74	Spike	P	0 - 30
2300987	MCPP	1.53	Spike	P	0 - 30
2300987	Naproxen	26.5	Spike	P	0 - 30
2300987	Primidone	1.31	Spike	P	0 - 30
2300987	Pyraclostrobin	5.17	Spike	P	0 - 30
2300987	Silvex	21.4	Spike	P	0 - 30
2300987	Thiamethoxam	1.98	Spike	P	0 - 30
2300987	Tolfenpyrad	5.77	Spike	P	0 - 30
2300987	Triclopyr	18.8	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2301015

Field Sample ID: G4NW0336

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	52.3	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	63.6	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	60.1	P	30 - 97.0
EPA 8276	PCNB	82.6	P	45 - 119

Lab Sample ID: 2301016

Field Sample ID: G4NW0335

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	61.8	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	66.6	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	71.8	P	30 - 97.0
EPA 8276	PCNB	85.5	P	45 - 119

Lab Sample ID: 2301017

Field Sample ID: G4NW0336

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.1	P	30 - 160
EPA 8321B	Diuron-d6	86.7	P	30 - 160
EPA 8321B	Endothall-d6	69.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.8	P	30 - 160
EPA 8321B	Primidone-d5	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	87.5	P	30 - 160

Lab Sample ID: 2301018

Field Sample ID: G4NW0335

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	92.0	P	30 - 160
EPA 8321B	Endothall-d6	69.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	88.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.3	P	30 - 160
EPA 8321B	Primidone-d5	93.3	P	30 - 160
EPA 8321B	Sucralose-d6	81.0	P	30 - 160

Lab Sample ID: 2301019

Field Sample ID: G4NW0357

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	91.6	P	30 - 160
EPA 8321B	Endothall-d6	76.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	88.6	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2301019

Field Sample ID: G4NW0357

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Ibuprofen-d3	87.9	P	30 - 160
EPA 8321B	Primidone-d5	99.4	P	30 - 160
EPA 8321B	Sucralose-d6	86.7	P	30 - 160

Lab Sample ID: 2301020

Field Sample ID: G4NW0489

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	82.2	P	30 - 160
EPA 8321B	Endothall-d6	91.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.7	P	30 - 160
EPA 8321B	Primidone-d5	99.0	P	30 - 160
EPA 8321B	Sucralose-d6	84.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A109991

Included Lab Sample IDs: 2301017, 2301018, 2301019, 2301020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	81.5	78.4	P/P	60 - 160
Endothall	66.6	75.9	P/P	60 - 160
Sucralose	96.6	78.9	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A110023

Included Lab Sample IDs: 2301017, 2301018, 2301019, 2301020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	103	P/P	60 - 160
Glufosinate	96.1	94.1	P/P	60 - 160
Glyphosate	94.8	94.9	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110039

Included Lab Sample IDs: 2301021, 2301022, 2301023, 2301024, 2301025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.8	97.5	P/P	90 - 110
Antimony	99.4	101	P/P	90 - 110
Arsenic	98.0	100	P/P	90 - 110
Barium	97.9	99.5	P/P	90 - 110
Beryllium	92.8	94.8	P/P	90 - 110
Boron	95.2	95.4	P/P	90 - 110
Cadmium	98.3	99.0	P/P	90 - 110
Chromium	94.9	96.2	P/P	90 - 110
Cobalt	95.1	96.9	P/P	90 - 110
Copper	94.0	96.1	P/P	90 - 110
Lead	93.5	93.9	P/P	90 - 110
Manganese	94.9	96.6	P/P	90 - 110
Molybdenum	96.4	98.1	P/P	90 - 110
Nickel	94.7	96.4	P/P	90 - 110
Selenium	98.9	98.9	P/P	90 - 110
Silver	99.9	101	P/P	90 - 110
Thallium	100	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110045

Included Lab Sample IDs: 2301021, 2301022, 2301023, 2301024, 2301025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.3	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	97.7	97.1	P/P	90 - 110
Sodium	98.3	97.9	P/P	90 - 110
Strontium	107	102	P/P	90 - 110
Tin	103	100	P/P	90 - 110
Titanium	103	102	P/P	90 - 110
Vanadium	103	101	P/P	90 - 110
Zinc	104	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A110060

Included Lab Sample IDs: 2301015, 2301016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.6		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	99.7		P	80 - 120
Beta-Cyfluthrin	90.8		P	80 - 120
Bifenthrin	98.6		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorothalonil	89.0		P	80 - 120
Cis-Nonachlor	101		P	80 - 120
Cypermethrin	95.1		P	80 - 120
Dacthal	98.6		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	97.4		P	80 - 120
DDT-p,p'	98.5		P	80 - 120
Delta-BHC	94.8		P	80 - 120
Deltamethrin	90.0		P	80 - 120
Dichlobenil	95.6		P	80 - 120
Dicofol	98.0		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	96.5		P	80 - 120
Endosulfan II	99.8		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	99.0		P	80 - 120
Endrin Ketone	100		P	80 - 120
Esfenvalerate	89.8		P	80 - 120
Ethalfuralin	96.6		P	80 - 120
Fenpropathrin	100		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	99.1		P	80 - 120
Heptachlor	100		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	98.6		P	80 - 120
Kepone	67.7*		F	80 - 120
Lambda-Cyhalothrin	94.1		P	80 - 120
Methoprene	97.8		P	80 - 120
Methoxychlor	97.6		P	80 - 120
MGK-264	94.3		P	80 - 120
Mirex	99.0		P	80 - 120
Oxychlordane	99.2		P	80 - 120
Permethrin	101		P	80 - 120
Phenothrin	95.9		P	80 - 120
Piperonyl Butoxide	83.1		P	80 - 120
Prallethrin	90.4		P	80 - 120
Tau-Fluvalinate	95.2		P	80 - 120
Tetramethrin	86.6		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	99.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A110074

Included Lab Sample IDs: 2301015, 2301016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Chlordane	98.5		P	80 - 120
Toxaphene	97.2		P	80 - 120
Toxaphene	98.2		P	80 - 120

Reference Method: EPA 8321B

Run ID: A110148

Included Lab Sample IDs: 2301017, 2301018, 2301019, 2301020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.4	81.4	P/P	50 - 150
2,4,5-T	76.0	87.2	P/P	50 - 150
Acetaminophen	109	107	P/P	60 - 160
Acetamiprid	103	105	P/P	50 - 150
Afidopyropen	90.8	99.6	P/P	50 - 150
Bentazon	82.9	80.7	P/P	50 - 160
Benzovindiflupyr	103	103	P/P	50 - 160
Carbamazepine	105	103	P/P	60 - 150
Clothianidin	113	95.5	P/P	60 - 150
Dinotefuran	104	112	P/P	50 - 150
Diuron	105	114	P/P	60 - 160
Fenuron	108	110	P/P	60 - 150
Fluridone	104	102	P/P	60 - 160
Hydrocodone	102	104	P/P	60 - 150
Ibuprofen	98.8	96.2	P/P	50 - 160
Imazapyr	112	130	P/P	50 - 160
Imidacloprid	101	103	P/P	60 - 150
Linuron	108	101	P/P	60 - 150
Mandestrobin	109	117	P/P	50 - 150
MCPP	93.0	93.3	P/P	50 - 150
Naproxen	106	95.7	P/P	50 - 160
Primidone	94.4	97.8	P/P	60 - 150
Pyraclostrobin	113	110	P/P	60 - 150
Silvex	73.1	69.6	P/P	50 - 150
Thiamethoxam	102	101	P/P	50 - 150
Tolfenpyrad	107	103	P/P	60 - 150
Triclopyr	91.0	87.0	P/P	50 - 150

* 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				
EPA 200.7 Rev. 4.4	Calcium	103	103	103			0.170
	Iron	107	106	109	107		1.14
	Magnesium	108	107	108	107		1.02
	Potassium	103	107	103	102		0.696
	Sodium	102	101	99.2			0.0551
	Strontium	106	106	105	105		0.119
	Tin	109	109	110	109		0.951
	Titanium	109	108	110	107		2.50
	Vanadium	108	107	109	106		2.22
	Zinc	108	108	109	106		2.90
EPA 200.8 Rev. 5.4	Aluminum	101	99.6	101	101		1.11
	Antimony	102	103	105	103		2.28
	Arsenic	101	100	102	102		1.72
	Barium	105	104	107	107		2.50
	Beryllium	97.8	95.7	99.6	99.3		3.87
	Boron	98.9	96.3	98.0	98.2		1.56
	Cadmium	99.8	101	103	102		1.64
	Chromium	99.9	100	102	102		1.90
	Cobalt	101	100	101	101		1.20
	Copper	99.7	98.8	99.1	101		0.308
	Lead	98.9	98.2	101	101		2.41
	Manganese	98.2	97.8	99.1	99.0		1.10
	Molybdenum	102	103	105	102		1.77
	Nickel	101	100	101	101		0.549
	Selenium	98.5	97.1	97.8	99.9		0.727
	Silver	104	102	104	104		1.96
	Thallium	105	104	108	108		3.70
EPA 8270E	Aldrin	55.1	56.4	59.1			4.77
	Alpha-BHC	92.8	96.4	95.3			1.05
	Alpha-Chlordane	79.8	76.4	78.1			2.10
	Beta-BHC	107	103	103			0.646
	Beta-Cyfluthrin	84.1	89.5	89.3			0.199
	Bifenthrin	68.1	78.9	83.6			5.82
	Carbophenothion	55.9	59.1	60.3			1.99
	Chlorothalonil	120	212	199			5.87
	Cis-Nonachlor	64.7	63.3	64.9			2.47
	Cypermethrin	87.9	84.7	74.4			12.9
	Dacthal	88.9	84.8	88.8			4.57
	DDD-p,p'	74.6	70.9	73.8			3.99
	DDE-p,p'	73.2	67.4	70.4			4.37
	DDT-p,p'	77.1	82.3	83.4			1.29
	Delta-BHC	105	111	107			3.09
	Deltamethrin	96.4	107	110			2.24
	Dichlobenil	84.2	85.8	85.2			0.604
	Dicofol	75.8	79.3	79.2			0.233
	Dieldrin	76.9	68.1	71.4			4.53
	Endosulfan I	73.6	73.5	77.6			5.36
	Endosulfan II	75.1	65.5	65.5			0.0376
	Endosulfan Sulfate	91.8	82.6	83.1			0.551
	Endrin	63.7	67.4	68.7			2.02
	Endrin Aldehyde	73.0	47.6	41.2			14.5
	Endrin Ketone	101	89.5	96.3			7.36
	Esfenvalerate	80.9	91.5	92.6			1.19
	Ethalfuralin	77.1	83.3	84.5			1.40

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Fenpropathrin	85.2	85.8	88.8		3.53
	Gamma-BHC	104	106	103		3.25
	Gamma-Chlordane	77.4	74.0	77.9		5.12
	Heptachlor	70.1	70.6	73.2		3.55
	Heptachlor Epoxide	84.3	80.5	83.6		3.70
	Hexachlorobenzene	76.1	88.0	85.6		2.81
	Kepone	127	78.6	59.6		10.5
	Lambda-Cyhalothrin	86.7	103	101		1.53
	Methoprene	60.1	63.1	65.7		4.07
	Methoxychlor	94.1	104	102		1.64
	MGK-264	75.9	75.5	77.9		3.13
	Mirex	58.8	57.0	59.1		3.69
	Oxychlordane	68.5	82.0	96.9		16.7
	Permethrin	90.8	128	96.0		28.6
	Phenothrin	64.2	79.7	79.9		0.197
	Piperonyl Butoxide	88.0	95.1	97.8		2.78
	Prallethrin	64.2	70.2	62.1		12.3
	Tau-Fluvalinate	74.8	82.3	84.3		2.34
	Tetramethrin	80.4	109	107		1.84
	Trans-Nonachlor	75.0	72.4	70.6		2.60
EPA 8276	Triclosan Methyl	73.7	67.6	71.8		6.08
	Trifluralin	78.7	85.2	85.0		0.278
	Chlordane	76.6	77.4	70.4		9.44
EPA 8321B	Toxaphene	76.5	83.3	72.0		14.6
	2,4-D	94.2	128	140		8.72
	2,4,5-T	92.0	107	135		22.8
	Acesulfame K	112	130	141		8.14
	Acetaminophen	61.6	85.7	85.5		0.257
	Acetamiprid	95.6	114	100		13.2
	Afidopyropen	78.2	78.6	65.4		18.3
	AMPA	91.4	71.5	72.6		1.10
	Bentazon	92.9	78.4	76.1		2.93
	Benzovindiflupyr	96.4	103	107		4.28
	Carbamazepine	99.8	113	122		7.46
	Clothianidin	103	140	147		4.69
	Dinotefuran	105	131	135		3.31
	Diuron	98.6	87.5	86.0		1.72
	Endothall	115	96.5	101		4.55
	Fenuron	106	92.7	99.6		7.20
	Fluridone	113	97.4	113		14.8
	Glufosinate	95.7	76.8	76.8		0.0479
	Glyphosate	90.3	73.5	73.5		0.0447
	Hydrocodone	98.6	113	120		5.84
	Ibuprofen	92.1	91.9	85.2		7.57
	Imazapyr	110	198	202		1.95
	Imidacloprid	95.7	182	188		3.51
	Linuron	82.7	79.0	74.7		5.60
	Mandestrobin	98.6	103	107		3.74
	MCPP	120	145	147		1.53
	Naproxen	114	87.4	114		26.5
	Primidone	95.9	116	115		1.31
	Pyraclostrobin	89.7	101	106		5.17
	Silvex	70.5	89.1	110		21.4
	Sucralose	86.1	84.2	88.7		4.88

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS	MS		
EPA 8321B	Thiamethoxam	101	153	156		1.98
	Tolfenpyrad	44.8	63.6	67.3		5.77
	Triclopyr	90.4	114	138		18.8

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2301021, 2301022, 2301023, 2301024, 2301025
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2301021, 2301022, 2301023, 2301024, 2301025
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2301015, 2301016
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2301015, 2301016
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2301017, 2301018, 2301019, 2301020
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2301021, 2301022, 2301023, 2301024, 2301025

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/25/2022 16:33	Josef B Mick	2301021
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/25/2022 16:39	Josef B Mick	2301022
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/25/2022 16:44	Josef B Mick	2301023
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/25/2022 16:50	Josef B Mick	2301024
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/25/2022 16:56	Josef B Mick	2301025
EPA 200.8 Rev. 5.4	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/26/2022 05:03	McKinley C Carter	2301021
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/26/2022 05:12	McKinley C Carter	2301022
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/26/2022 05:22	McKinley C Carter	2301023
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/26/2022 05:31	McKinley C Carter	2301024
	01/21/2022	01/24/2022 11:05	Emily M Philpot	01/26/2022 05:41	McKinley C Carter	2301025
EPA 8270E	01/21/2022	01/24/2022 08:30	Rasheda Ghaffari	01/26/2022 21:02	Vandana T. Nagar	2301015
	01/21/2022	01/24/2022 08:30	Rasheda Ghaffari	01/26/2022 21:31	Vandana T. Nagar	2301016
EPA 8276	01/21/2022	01/24/2022 08:30	Rasheda Ghaffari	01/27/2022 04:20	Arthur Maknenko	2301016
	01/21/2022	01/24/2022 08:30	Rasheda Ghaffari	01/27/2022 10:03	Arthur Maknenko	2301015
EPA 8321B	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 17:32	Manjita Shrestha	2301017
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 17:43	Manjita Shrestha	2301018
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 17:54	Manjita Shrestha	2301019
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 18:04	Manjita Shrestha	2301020
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 21:38	Manjita Shrestha	2301017
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 21:53	Manjita Shrestha	2301018
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 22:08	Manjita Shrestha	2301019
	01/21/2022	01/21/2022 12:30	Manjita Shrestha	01/21/2022 22:23	Manjita Shrestha	2301020
	01/21/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 00:43	Juyoung Kim	2301017
	01/21/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 01:18	Juyoung Kim	2301018
	01/21/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 01:52	Juyoung Kim	2301019
	01/21/2022	01/27/2022 09:00	Hoor Shaik	01/30/2022 02:27	Juyoung Kim	2301020
SM 2340B	01/21/2022			01/25/2022 16:33	Josef B Mick	2301021
	01/21/2022			01/25/2022 16:39	Josef B Mick	2301022
	01/21/2022			01/25/2022 16:44	Josef B Mick	2301023
	01/21/2022			01/25/2022 16:50	Josef B Mick	2301024
	01/21/2022			01/25/2022 16:56	Josef B Mick	2301025