

Chemical Analysis Report

NE-DIST-2020-11-17-02

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

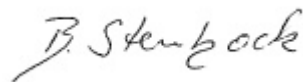
Event Description: **Miramar organic**
Request ID: **RQ-2020-11-09-31**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 30-NOV-2020 16:17



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 group are included in this report: 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: Miramar at San Jose

Collection Date/Time: 11/16/2020 14:45

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2208055	EPA 8270E	Aldrin	0.78	U	ng/L	P390201	
		Dieldrin	9.0		ng/L	P390201	
		Alpha-BHC	2.1	U	ng/L	P390201	
		Kepone**	5.8	UJ	ng/L	P390201	CCV
		Alpha-Chlordane	1.3	I	ng/L	P390201	
		Beta-BHC	8.4	U	ng/L	P390201	
		Beta-Cyfluthrin**	16	U	ng/L	P390201	
		Bifenthrin**	4.2	U	ng/L	P390201	
		Delta-BHC	8.4	U	ng/L	P390201	
		Gamma-BHC	8.4	U	ng/L	P390201	
		Carbophenothion	10	U	ng/L	P390201	
		Chlorothalonil	2.1	U	ng/L	P390201	RPD
		Cis-Nonachlor**	1.0	U	ng/L	P390201	
		Cypermethrin	21	U	ng/L	P390201	
		Dacthal**	1.0	U	ng/L	P390201	
		DDD-p,p'	5.2	U	ng/L	P390201	
		DDE-p,p'	5.2	U	ng/L	P390201	
		DDT-p,p'	6.3	U	ng/L	P390201	
		Deltamethrin**	21	U	ng/L	P390201	
		Dicofol	31	UJ	ng/L	P390201	CCV
		Endosulfan I	4.2	U	ng/L	P390201	
		Endosulfan II	4.2	UJ	ng/L	P390201	LCS
		Endosulfan Sulfate	2.1	U	ng/L	P390201	
		Endrin	2.1	U	ng/L	P390201	
		Endrin Aldehyde	2.1	UJ	ng/L	P390201	LCS
		Endrin Ketone	2.1	U	ng/L	P390201	
		Ethalfuralin**	3.1	U	ng/L	P390201	
		Gamma-Chlordane	1.0	U	ng/L	P390201	
		Dichlobenil**	2.1	U	ng/L	P390201	
		Esfenvalerate**	21	U	ng/L	P390201	
		Fenpropathrin**	10	U	ng/L	P390201	
		Heptachlor	1.6	U	ng/L	P390201	
		Heptachlor Epoxide	2.7	I	ng/L	P390201	
		Hexachlorobenzene	2.1	U	ng/L	P390201	
		Lambda-Cyhalothrin**	16	U	ng/L	P390201	
		Methoxychlor	4.2	U	ng/L	P390201	
		Mirex	2.1	U	ng/L	P390201	
		MGK-264**	3.1	UJ	ng/L	P390201	LCS
		Permethrin	10	U	ng/L	P390201	
		Phenothrin**	31	U	ng/L	P390201	
		Piperonyl Butoxide**	1.6	U	ng/L	P390201	
		Prallethrin**	26	U	ng/L	P390201	
		Tau-Fluvalinate**	3.7	U	ng/L	P390201	MS
		Tetramethrin**	8.4	U	ng/L	P390201	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2208055	EPA 8270E	Trans-Nonachlor**	1.0	U	ng/L	P390201	
		Triclosan Methyl**	1.0	U	ng/L	P390201	
		Trifluralin	2.6	U	ng/L	P390201	
	EPA 8276	Chlordane	9.8	I	ng/L	P390201	
		Toxaphene	31	U	ng/L	P390201	

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 8270E
Batch ID: P390201

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Kepone	5.5	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P390201

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276
Batch ID: P390201

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P390201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	28.5	31.2	P/P	20 - 119
Alpha-BHC	91.5	91.1	P/P	65 - 142
Alpha-Chlordane	95.6	97.9	P/P	58 - 106
Beta-BHC	98.1	103	P/P	65 - 179
Beta-Cyfluthrin	116	129	P/P	39 - 153
Bifenthrin	100	97.3	P/P	38 - 128
Carbophenothion	60.2	69.9	P/P	20 - 144
Chlorothalonil	61.4	60.5	P/P	20 - 214
Cis-Nonachlor	100	100	P/P	56 - 113
Cypermethrin	112	114	P/P	37 - 130
Dacthal	104	106	P/P	75 - 109
DDD-p,p'	104	107	P/P	66 - 119
DDE-p,p'	93.2	92.9	P/P	53 - 108
DDT-p,p'	95.8	95.5	P/P	57 - 133
Delta-BHC	157	177	P/P	68 - 187
Deltamethrin	116	136	P/P	50 - 200
Dichlobenil	68.9	74.3	P/P	25 - 140
Dicofol	109	113	P/P	66 - 123
Dieldrin	78.1	80.1	P/P	57 - 120
Endosulfan I	106	109	P/P	65 - 115
Endosulfan II	122	148	P/F	68 - 133
Endosulfan Sulfate	111	119	P/P	62 - 127
Endrin	94.8	95.6	P/P	64 - 122
Endrin Aldehyde	59.5	64.5	F/P	61 - 132
Endrin Ketone	103	108	P/P	66 - 120
Esfenvalerate	76.3	86.8	P/P	50 - 150
Ethalfuralin	86.8	84.9	P/P	57 - 127
Fenpropathrin	90.4	91.1	P/P	60 - 160
Gamma-BHC	106	107	P/P	71 - 158
Gamma-Chlordane	94.3	96.7	P/P	53 - 106
Heptachlor	84.7	86.9	P/P	45 - 96.0
Heptachlor Epoxide	98.5	101	P/P	64 - 109
Hexachlorobenzene	87.5	89.9	P/P	46 - 103
Kepone	87.5	85.2	P/P	30 - 150
Lambda-Cyhalothrin	113	121	P/P	38 - 145
Methoxychlor	91.2	92.0	P/P	69 - 149
MGK-264	47.3	49.1	F/F	50 - 150
Mirex	79.7	78.8	P/P	31 - 90.0
Permethrin	93.5	95.2	P/P	41 - 108
Phenothrin	54.7	55.0	P/P	22 - 91.0
Piperonyl Butoxide	102	106	P/P	50 - 150
Prallethrin	54.1	54.6	P/P	32 - 92.0
Tau-Fluvalinate	118	132	P/P	50 - 150
Tetramethrin	98.7	115	P/P	60 - 160
Trans-Nonachlor	95.2	95.5	P/P	50 - 107
Triclosan Methyl	109	113	P/P	50 - 150
Trifluralin	84.8	85.3	P/P	58 - 119

Reference Method: EPA 8276
 Batch ID: P390201

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

Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P390201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.1	90.8	P/P	47 - 119
Toxaphene	69.1	68.3	P/P	41 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P390201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2207568	Aldrin	59.8	59.5	P/P	37 - 137
2207568	Dieldrin	77.0	73.5	P/P	57 - 120
2207568	Kepone	80.4	75.6	P/P	30 - 150
2207762	Alpha-BHC	83.2	81.0	P/P	68 - 157
2207762	Alpha-Chlordane	92.6	91.5	P/P	54 - 108
2207762	Beta-BHC	94.5	87.4	P/P	54 - 200
2207762	Beta-Cyfluthrin	139	141	P/P	50 - 154
2207762	Bifenthrin	103	104	P/P	49 - 124
2207762	Carbophenothion	92.2	87.3	P/P	42 - 173
2207762	Chlorothalonil	132	91.1	P/P	10 - 289
2207762	Cis-Nonachlor	96.7	91.2	P/P	53 - 112
2207762	Cypermethrin	123	125	P/P	43 - 141
2207762	Dacthal	99.5	98.6	P/P	75 - 112
2207762	DDD-p,p'	99.9	96.3	P/P	58 - 125
2207762	DDE-p,p'	88.8	85.9	P/P	50 - 108
2207762	DDT-p,p'	92.1	90.3	P/P	52 - 140
2207762	Delta-BHC	167	162	P/P	61 - 228
2207762	Deltamethrin	127	134	P/P	50 - 200
2207762	Dichlobenil	76.3	76.5	P/P	25 - 140
2207762	Dicofol	105	119	P/P	59 - 130
2207762	Endosulfan I	112	108	P/P	62 - 123
2207762	Endosulfan II	127	144	P/P	48 - 163
2207762	Endosulfan Sulfate	117	110	P/P	63 - 132
2207762	Endrin	98.6	93.6	P/P	58 - 128
2207762	Endrin Aldehyde	62.2	65.9	P/P	44 - 126
2207762	Endrin Ketone	102	102	P/P	68 - 127
2207762	Esfenvalerate	72.2	63.0	P/P	50 - 150
2207762	Ethalfuralin	81.6	84.0	P/P	55 - 131
2207762	Fenpropathrin	99.5	105	P/P	60 - 160
2207762	Gamma-BHC	105	101	P/P	54 - 206
2207762	Gamma-Chlordane	90.3	89.0	P/P	52 - 105
2207762	Heptachlor	83.7	84.0	P/P	47 - 94.0
2207762	Heptachlor Epoxide	95.2	93.5	P/P	61 - 113
2207762	Hexachlorobenzene	72.6	72.0	P/P	45 - 100
2207762	Lambda-Cyhalothrin	141	135	P/P	37 - 165
2207762	Methoxychlor	87.4	90.1	P/P	63 - 153
2207762	MGK-264	60.4	60.7	P/P	50 - 150
2207762	Mirex	79.6	79.4	P/P	38 - 90.0
2207762	Permethrin	95.6	99.8	P/P	45 - 112
2207762	Phenothrin	70.9	73.1	P/P	22 - 118
2207762	Piperonyl Butoxide	104	111	P/P	50 - 150
2207762	Prallethrin	62.5	59.2	P/P	21 - 114
2207762	Tau-Fluvalinate	143	153	P/F	50 - 150
2207762	Tetramethrin	142	153	P/P	60 - 160
2207762	Trans-Nonachlor	87.8	85.0	P/P	50 - 103
2207762	Triclosan Methyl	100	99.3	P/P	50 - 150
2207762	Trifluralin	80.1	81.1	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P390201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P390201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2207568	Chlordane	82.4	83.2	P/P	34 - 129
2207568	Toxaphene	70.9	78.9	P/P	16 - 148

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2207568	Aldrin	0.451	Spike	P	0 - 30
2207568	Dieldrin	3.83	Spike	P	0 - 30
2207568	Kepone	6.06	Spike	P	0 - 30
2207762	Alpha-BHC	2.70	Spike	P	0 - 30
2207762	Alpha-Chlordane	1.20	Spike	P	0 - 30
2207762	Beta-BHC	7.88	Spike	P	0 - 30
2207762	Beta-Cyfluthrin	1.61	Spike	P	0 - 30
2207762	Bifenthrin	0.643	Spike	P	0 - 30
2207762	Carbophenothion	5.50	Spike	P	0 - 30
2207762	Chlorothalonil	36.3	Spike	F	0 - 30
2207762	Cis-Nonachlor	5.85	Spike	P	0 - 30
2207762	Cypermethrin	1.98	Spike	P	0 - 30
2207762	Dacthal	0.974	Spike	P	0 - 30
2207762	DDD-p,p'	3.65	Spike	P	0 - 30
2207762	DDE-p,p'	3.35	Spike	P	0 - 30
2207762	DDT-p,p'	1.96	Spike	P	0 - 30
2207762	Delta-BHC	3.12	Spike	P	0 - 30
2207762	Deltamethrin	5.07	Spike	P	0 - 30
2207762	Dichlobenil	0.310	Spike	P	0 - 30
2207762	Dicofol	11.9	Spike	P	0 - 30
2207762	Endosulfan I	3.35	Spike	P	0 - 30
2207762	Endosulfan II	12.9	Spike	P	0 - 30
2207762	Endosulfan Sulfate	6.58	Spike	P	0 - 30
2207762	Endrin	5.13	Spike	P	0 - 30
2207762	Endrin Aldehyde	5.66	Spike	P	0 - 30
2207762	Endrin Ketone	0.332	Spike	P	0 - 30
2207762	Esfenvalerate	13.6	Spike	P	0 - 30
2207762	Ethalfuralin	2.91	Spike	P	0 - 30
2207762	Fenpropathrin	5.20	Spike	P	0 - 30
2207762	Gamma-BHC	4.10	Spike	P	0 - 30
2207762	Gamma-Chlordane	1.46	Spike	P	0 - 30
2207762	Heptachlor	0.328	Spike	P	0 - 30
2207762	Heptachlor Epoxide	1.76	Spike	P	0 - 30
2207762	Hexachlorobenzene	0.788	Spike	P	0 - 30
2207762	Lambda-Cyhalothrin	4.08	Spike	P	0 - 30
2207762	Methoxychlor	3.13	Spike	P	0 - 30
2207762	MGK-264	0.508	Spike	P	0 - 30
2207762	Mirex	0.258	Spike	P	0 - 30
2207762	Permethrin	4.26	Spike	P	0 - 30
2207762	Phenothrin	3.12	Spike	P	0 - 30
2207762	Piperonyl Butoxide	6.76	Spike	P	0 - 30
2207762	Prallethrin	5.35	Spike	P	0 - 30
2207762	Tau-Fluvalinate	6.72	Spike	P	0 - 30
2207762	Tetramethrin	7.56	Spike	P	0 - 30
2207762	Trans-Nonachlor	3.20	Spike	P	0 - 30
2207762	Triclosan Methyl	0.843	Spike	P	0 - 30
2207762	Trifluralin	1.35	Spike	P	0 - 30
LFB	Aldrin	8.99	LCS	P	0 - 30
LFB	Alpha-BHC	0.497	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.29	LCS	P	0 - 30
LFB	Beta-BHC	5.22	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P390201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-Cyfluthrin	10.9	LCS	P	0 - 30
LFB	Bifenthrin	2.90	LCS	P	0 - 30
LFB	Carbophenothion	15.0	LCS	P	0 - 30
LFB	Chlorothalonil	1.58	LCS	P	0 - 30
LFB	Cis-Nonachlor	0.171	LCS	P	0 - 30
LFB	Cypermethrin	1.79	LCS	P	0 - 30
LFB	Dacthal	2.13	LCS	P	0 - 30
LFB	DDD-p,p'	3.29	LCS	P	0 - 30
LFB	DDE-p,p'	0.346	LCS	P	0 - 30
LFB	DDT-p,p'	0.332	LCS	P	0 - 30
LFB	Delta-BHC	12.1	LCS	P	0 - 30
LFB	Deltamethrin	16.0	LCS	P	0 - 30
LFB	Dichlobenil	7.53	LCS	P	0 - 30
LFB	Dicofol	3.96	LCS	P	0 - 30
LFB	Dieldrin	2.48	LCS	P	0 - 30
LFB	Endosulfan I	2.33	LCS	P	0 - 30
LFB	Endosulfan II	18.9	LCS	P	0 - 30
LFB	Endosulfan Sulfate	7.15	LCS	P	0 - 30
LFB	Endrin	0.824	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.02	LCS	P	0 - 30
LFB	Endrin Ketone	4.44	LCS	P	0 - 30
LFB	Esfenvalerate	12.8	LCS	P	0 - 30
LFB	Ethalfuralin	2.26	LCS	P	0 - 30
LFB	Fenpropathrin	0.733	LCS	P	0 - 30
LFB	Gamma-BHC	1.45	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.51	LCS	P	0 - 30
LFB	Heptachlor	2.58	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.50	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.75	LCS	P	0 - 30
LFB	Kepone	2.60	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	6.14	LCS	P	0 - 30
LFB	Methoxychlor	0.799	LCS	P	0 - 30
LFB	MGK-264	3.75	LCS	P	0 - 30
LFB	Mirex	1.06	LCS	P	0 - 30
LFB	Permethrin	1.86	LCS	P	0 - 30
LFB	Phenothrin	0.553	LCS	P	0 - 30
LFB	Piperonyl Butoxide	3.85	LCS	P	0 - 30
LFB	Prallethrin	0.817	LCS	P	0 - 30
LFB	Tau-Fluvalinate	10.6	LCS	P	0 - 30
LFB	Tetramethrin	15.5	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.364	LCS	P	0 - 30
LFB	Triclosan Methyl	2.92	LCS	P	0 - 30
LFB	Trifluralin	0.623	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P390201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2207568	Chlordane	0.888	Spike	P	0 - 30
2207568	Toxaphene	10.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P390201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	2.56	LCS	P	0 - 30
LFB	Toxaphene	1.22	LCS	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2208055
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	92.8	P	39 - 118
EPA 8270E	Decachlorobiphenyl	86.0	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	64.7	P	28 - 102
EPA 8270E	Tetrachloro-m-xylene	72.4	P	34 - 106
EPA 8276	Decachlorobiphenyl	44.4	P	26 - 97.0
EPA 8276	PCNB	105	P	38 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276
Run ID: A102206
Included Lab Sample IDs: 2208055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.2		P	80 - 120
Toxaphene	92.5		P	80 - 120

Reference Method: EPA 8270E
Run ID: A102254
Included Lab Sample IDs: 2208055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.3		P	80 - 120
Dieldrin	98.2		P	80 - 120
Kepone	63.8*		F	80 - 120

Reference Method: EPA 8270E
Run ID: A102276
Included Lab Sample IDs: 2208055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	99.3		P	80 - 120
Alpha-Chlordane	99.3		P	80 - 120
Beta-BHC	95.3		P	80 - 120
Beta-Cyfluthrin	80.5		P	80 - 120
Bifenthrin	96.1		P	80 - 120
Carbophenothion	96.7		P	80 - 120
Chlorothalonil	81.0		P	80 - 120
Cis-Nonachlor	96.2		P	80 - 120
Cypermethrin	92.2		P	80 - 120
Dacthal	98.1		P	80 - 120
DDD-p,p'	97.5		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	92.6		P	80 - 120
Deltamethrin	94.2		P	80 - 120
Dichlobenil	85.7		P	80 - 120
Dicofol	125*		F	80 - 120
Endosulfan I	89.4		P	80 - 120
Endosulfan II	94.7		P	80 - 120
Endosulfan Sulfate	93.9		P	80 - 120
Endrin	95.2		P	80 - 120
Endrin Aldehyde	112		P	80 - 120
Endrin Ketone	94.4		P	80 - 120
Esfenvalerate	92.3		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	88.8		P	80 - 120
Gamma-BHC	98.3		P	80 - 120
Gamma-Chlordane	96.1		P	80 - 120
Heptachlor	95.5		P	80 - 120
Heptachlor Epoxide	98.9		P	80 - 120
Hexachlorobenzene	98.2		P	80 - 120
Lambda-Cyhalothrin	80.1		P	80 - 120
Methoxychlor	96.4		P	80 - 120
MGK-264	98.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A102276

Included Lab Sample IDs: 2208055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	99.7		P	80 - 120
Permethrin	91.6		P	80 - 120
Phenothrin	88.7		P	80 - 120
Piperonyl Butoxide	85.5		P	80 - 120
Prallethrin	84.4		P	80 - 120
Tau-Fluvalinate	88.4		P	80 - 120
Tetramethrin	89.7		P	80 - 120
Trans-Nonachlor	99.0		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	95.6		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	
						LCS	MS
						SMP	
EPA 8270E	Aldrin	28.5	31.2	59.8	59.5	8.99	0.451
	Alpha-BHC	91.5	91.1	83.2	81.0	0.497	2.70
	Alpha-Chlordane	95.6	97.9	92.6	91.5	2.29	1.20
	Beta-BHC	98.1	103	94.5	87.4	5.22	7.88
	Beta-Cyfluthrin	116	129	139	141	10.9	1.61
	Bifenthrin	100	97.3	103	104	2.90	0.643
	Carbophenothion	60.2	69.9	92.2	87.3	15.0	5.50
	Chlorothalonil	61.4	60.5	132	91.1	1.58	36.3
	Cis-Nonachlor	100	100	96.7	91.2	0.171	5.85
	Cypermethrin	112	114	123	125	1.79	1.98
	Dacthal	104	106	99.5	98.6	2.13	0.974
	DDD-p,p'	104	107	99.9	96.3	3.29	3.65
	DDE-p,p'	93.2	92.9	88.8	85.9	0.346	3.35
	DDT-p,p'	95.8	95.5	92.1	90.3	0.332	1.96
	Delta-BHC	157	177	167	162	12.1	3.12
	Deltamethrin	116	136	127	134	16.0	5.07
	Dichlobenil	68.9	74.3	76.3	76.5	7.53	0.310
	Dicofol	109	113	105	119	3.96	11.9
	Dieldrin	78.1	80.1	77.0	73.5	2.48	3.83
	Endosulfan I	106	109	112	108	2.33	3.35
	Endosulfan II	122	148	127	144	18.9	12.9
	Endosulfan Sulfate	111	119	117	110	7.15	6.58
	Endrin	94.8	95.6	98.6	93.6	0.824	5.13
	Endrin Aldehyde	59.5	64.5	62.2	65.9	8.02	5.66
	Endrin Ketone	103	108	102	102	4.44	0.332
	Esfenvalerate	76.3	86.8	72.2	63.0	12.8	13.6
	Ethalfuralin	86.8	84.9	81.6	84.0	2.26	2.91
	Fenpropathrin	90.4	91.1	99.5	105	0.733	5.20
	Gamma-BHC	106	107	105	101	1.45	4.10
	Gamma-Chlordane	94.3	96.7	90.3	89.0	2.51	1.46
	Heptachlor	84.7	86.9	83.7	84.0	2.58	0.328
	Heptachlor Epoxide	98.5	101	95.2	93.5	2.50	1.76
	Hexachlorobenzene	87.5	89.9	72.6	72.0	2.75	0.788
	Kepone	87.5	85.2	80.4	75.6	2.60	6.06
	Lambda-Cyhalothrin	113	121	141	135	6.14	4.08
	Methoxychlor	91.2	92.0	87.4	90.1	0.799	3.13
	MGK-264	47.3	49.1	60.4	60.7	3.75	0.508
	Mirex	79.7	78.8	79.6	79.4	1.06	0.258
	Permethrin	93.5	95.2	95.6	99.8	1.86	4.26
	Phenothrin	54.7	55.0	70.9	73.1	0.553	3.12
	Piperonyl Butoxide	102	106	104	111	3.85	6.76
	Prallethrin	54.1	54.6	62.5	59.2	0.817	5.35
	Tau-Fluvalinate	118	132	143	153	10.6	6.72
	Tetramethrin	98.7	115	142	153	15.5	7.56
	Trans-Nonachlor	95.2	95.5	87.8	85.0	0.364	3.20
	Triclosan Methyl	109	113	100	99.3	2.92	0.843
	Trifluralin	84.8	85.3	80.1	81.1	0.623	1.35
EPA 8276	Chlordane	93.1	90.8	82.4	83.2	2.56	0.888
	Toxaphene	69.1	68.3	70.9	78.9	1.22	10.6

Reference Method Descriptions

Method	Description	Associated Samples
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Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2208055
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2208055
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2208055

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	11/17/2020	11/17/2020 13:00	Rasheda Ghaffari	11/20/2020 20:04	Arthur Maknenko	2208055
	11/17/2020	11/17/2020 13:00	Rasheda Ghaffari	11/23/2020 22:18	Arthur Maknenko	2208055
EPA 8276	11/17/2020	11/17/2020 13:00	Rasheda Ghaffari	11/19/2020 07:22	Michael Poppell	2208055