

Chemical Analysis Report

NW-DIST-2023-09-28-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **11-Mile Creek Recovery Run**
Request ID: **RQ-2023-09-25-13**
Customer: **NW-DIST**
Project ID: **SMP**

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

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

Certified by: Chris Bowen, Environmental Administrator

Date Certified: 20-OCT-2023 16:15



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: BAYOU CHICO DRAIN WEST ARM

Collection Date/Time: 09/27/2023 11:50

Field ID: G4NW0022

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2441343	EPA 8270E	Aldrin	0.69	U	ng/L	P436109	
		Alpha-BHC	0.11	U	ng/L	P436109	
		Alpha-Chlordane	0.47	I	ng/L	P436109	
		PCB-1016	2.1	U	ng/L	P436109	
		Beta-BHC	0.11	U	ng/L	P436109	
		PCB-1221	2.1	U	ng/L	P436109	
		Beta-Cyfluthrin	1.3	U	ng/L	P436109	
		PCB-1232	2.1	U	ng/L	P436109	
		Bifenthrin	0.53	U	ng/L	P436109	
		PCB-1242	2.1	U	ng/L	P436109	
		PCB-1248	2.1	U	ng/L	P436109	
		Chlorothalonil	3.8	U	ng/L	P436109	
		PCB-1254	2.1	U	ng/L	P436109	
		Cis-Nonachlor	0.21	U	ng/L	P436109	
		PCB-1260	2.1	U	ng/L	P436109	
		Cypermethrin	1.6	U	ng/L	P436109	
		Dacthal	0.16	U	ng/L	P436109	RPD
		DDD-p,p'	0.27	U	ng/L	P436109	
		DDE-p,p'	0.21	U	ng/L	P436109	
		DDT-p,p'	0.85	U	ng/L	P436109	MS, RPD
		Delta-BHC	0.42	U	ng/L	P436109	
		Deltamethrin	1.3	U	ng/L	P436109	
		Dichlobenil	0.27	U	ng/L	P436109	
		Dicofol	1.3	U	ng/L	P436109	
		Dieldrin	6.1		ng/L	P436109	
		Endosulfan I	0.42	U	ng/L	P436109	
		Endosulfan II	0.96	U	ng/L	P436109	
		Endosulfan Sulfate	0.32	U	ng/L	P436109	
		Endrin	0.96	U	ng/L	P436109	
		Endrin Aldehyde	0.80	U	ng/L	P436109	RPD
		Endrin Ketone	0.42	U	ng/L	P436109	
		Esfenvalerate	0.80	U	ng/L	P436109	
		Ethalfuralin	0.16	U	ng/L	P436109	
		Fenpropathrin	0.27	U	ng/L	P436109	
		Gamma-BHC	0.13	U	ng/L	P436109	
		Gamma-Chlordane	0.25	I	ng/L	P436109	
		Heptachlor	0.21	U	ng/L	P436109	
		Heptachlor Epoxide	3.4		ng/L	P436109	
		Hexachlorobenzene**	1.1	U	ng/L	P436109	
		Kepone	14	UJ	ng/L	P436109	CCV
		Lambda-Cyhalothrin	0.80	U	ng/L	P436109	
		Methoprene	0.80	U	ng/L	P436109	
		Methoxychlor	0.32	U	ng/L	P436109	
		MGK-264	0.21	U	ng/L	P436109	

Field ID: G4NW0022

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2441343	EPA 8270E	Mirex	0.37	UJ	ng/L	P436109	LCS
		Oxychlordane	0.32	U	ng/L	P436109	
		Permethrin	1.7	U	ng/L	P436109	
		Phenothrin	0.96	U	ng/L	P436109	
		Piperonyl Butoxide	0.38	I	ng/L	P436109	
		Prallethrin	2.1	U	ng/L	P436109	
		Tau-Fluvalinate	0.27	U	ng/L	P436109	
		Tetramethrin	0.80	U	ng/L	P436109	
		Trans-Nonachlor	0.21	U	ng/L	P436109	
		Triclosan Methyl	0.16	U	ng/L	P436109	
		Trifluralin	0.21	U	ng/L	P436109	
	EPA 8276	Chlordane	2.1	U	ng/L	P436109	
		Toxaphene	16	U	ng/L	P436109	

Ref. Method and Comment:
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8276: MS accuracy for Chlordane not assessed due to high content of this parameter in the sample spiked.

Sample Location: BAYOU CHICO AT NAVY BVLD BRIDGE

Collection Date/Time: 09/27/2023 11:30

Field ID: G4NW0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2441344	EPA 8270E	Aldrin	0.69	U	ng/L	P436109	
		Alpha-BHC	0.11	U	ng/L	P436109	
		Alpha-Chlordane	0.28	I	ng/L	P436109	
		PCB-1016	2.1	U	ng/L	P436109	
		Beta-BHC	0.11	U	ng/L	P436109	
		PCB-1221	2.1	U	ng/L	P436109	
		Beta-Cyfluthrin	1.3	U	ng/L	P436109	
		PCB-1232	2.1	U	ng/L	P436109	
		Bifenthrin	0.53	U	ng/L	P436109	
		PCB-1242	2.1	U	ng/L	P436109	
		PCB-1248	2.1	U	ng/L	P436109	
		Chlorothalonil	3.8	U	ng/L	P436109	
		PCB-1254	2.1	U	ng/L	P436109	
		Cis-Nonachlor	0.21	U	ng/L	P436109	
		PCB-1260	2.1	U	ng/L	P436109	
		Cypermethrin	1.6	U	ng/L	P436109	
		Dacthal	0.16	U	ng/L	P436109	RPD
		DDD-p,p'	0.26	U	ng/L	P436109	
		DDE-p,p'	0.21	U	ng/L	P436109	
		DDT-p,p'	0.85	U	ng/L	P436109	MS, RPD
		Delta-BHC	0.42	U	ng/L	P436109	
		Deltamethrin	1.3	U	ng/L	P436109	
		Dichlobenil	0.26	U	ng/L	P436109	
		Dicofol	1.3	U	ng/L	P436109	
		Dieldrin	4.9		ng/L	P436109	
		Endosulfan I	0.42	U	ng/L	P436109	
		Endosulfan II	0.95	U	ng/L	P436109	
		Endosulfan Sulfate	0.32	U	ng/L	P436109	
		Endrin	0.95	U	ng/L	P436109	
		Endrin Aldehyde	0.79	U	ng/L	P436109	RPD
		Endrin Ketone	0.42	U	ng/L	P436109	
		Esfenvalerate	0.79	U	ng/L	P436109	
		Ethalfuralin	0.16	U	ng/L	P436109	
		Fenpropathrin	0.26	U	ng/L	P436109	
		Gamma-BHC	0.13	U	ng/L	P436109	
		Gamma-Chlordane	0.22	I	ng/L	P436109	
		Heptachlor	0.21	U	ng/L	P436109	
		Heptachlor Epoxide	2.8		ng/L	P436109	
		Hexachlorobenzene**	1.1	U	ng/L	P436109	
		Kepone	14	UJ	ng/L	P436109	CCV
		Lambda-Cyhalothrin	0.79	U	ng/L	P436109	
		Methoprene	0.79	U	ng/L	P436109	
		Methoxychlor	0.32	U	ng/L	P436109	
		MGK-264	0.21	U	ng/L	P436109	

Field ID: G4NW0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2441344	EPA 8270E	Mirex	0.37	UJ	ng/L	P436109	LCS
		Oxychlordane	0.32	U	ng/L	P436109	
		Permethrin	1.7	U	ng/L	P436109	
		Phenothrin	0.95	U	ng/L	P436109	
		Piperonyl Butoxide	0.23	I	ng/L	P436109	
		Prallethrin	2.1	U	ng/L	P436109	
		Tau-Fluvalinate	0.26	U	ng/L	P436109	
		Tetramethrin	0.79	U	ng/L	P436109	
		Trans-Nonachlor	0.21	U	ng/L	P436109	
		Triclosan Methyl	0.16	U	ng/L	P436109	
		Trifluralin	0.21	U	ng/L	P436109	
	EPA 8276	Chlordane	2.1	U	ng/L	P436109	
		Toxaphene	16	U	ng/L	P436109	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8276: MS accuracy for Chlordane not assessed due to high content of this parameter in the sample spiked.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P436109

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P436109

Component	Result	Code	Units
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P436109

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P436109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	88.9		P	30 - 96.0
Alpha-BHC	94.5		P	70 - 109
Alpha-Chlordane	103		P	45 - 107
Beta-BHC	74.3		P	64 - 138
Beta-Cyfluthrin	82.8		P	17 - 141
Bifenthrin	91.0		P	10 - 113
Chlorothalonil	68.5		P	26 - 180
Cis-Nonachlor	101		P	37 - 102
Cypermethrin	93.5		P	20 - 133
Dacthal	95.1		P	69 - 114
DDD-p,p'	103		P	42 - 105
DDE-p,p'	104		P	42 - 106
DDT-p,p'	94.3		P	42 - 107
Delta-BHC	81.0		P	67 - 144
Deltamethrin	77.0		P	15 - 149
Dichlobenil	84.1		P	46 - 117
Dicofol	87.1		P	34 - 114
Dieldrin	95.3		P	50 - 108
Endosulfan I	91.1		P	55 - 104
Endosulfan II	99.4		P	51 - 111
Endosulfan Sulfate	96.6		P	56 - 121
Endrin	105		P	10 - 106
Endrin Aldehyde	95.1		P	34 - 114
Endrin Ketone	87.7		P	63 - 177
Esfenvalerate	85.6		P	29 - 143
Ethalfuralin	90.6		P	46 - 96.0
Fenpropathrin	86.6		P	28 - 115
Gamma-BHC	84.5		P	65 - 121
Gamma-Chlordane	99.2		P	39 - 103
Heptachlor	79.5		P	39 - 94.0
Heptachlor Epoxide	92.7		P	54 - 104
Hexachlorobenzene	78.3		P	36 - 100
Kepone	13.0		P	10 - 225
Lambda-Cyhalothrin	89.5		P	10 - 135
Methoprene	100		P	10 - 109
Methoxychlor	89.8		P	52 - 112
MGK-264	89.6		P	44 - 117
Mirex	97.3		F	20 - 90.0
Oxychlordane	91.4		P	44 - 102
PCB-1016	79.7		P	45 - 107
PCB-1260	84.7		P	40 - 118
Permethrin	91.2		P	18 - 135
Phenothrin	88.3		P	10 - 102
Piperonyl Butoxide	60.1		P	28 - 156
Prallethrin	89.9		P	28 - 113
Tau-Fluvalinate	83.3		P	10 - 123
Tetramethrin	72.3		P	18 - 158
Trans-Nonachlor	94.7		P	39 - 104
Triclosan Methyl	85.2		P	54 - 108
Trifluralin	93.3		P	46 - 97.0

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P436109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.5		P	52 - 117
Toxaphene	110		P	44 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P436109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441304	Aldrin	73.0	65.7	P/P	24 - 81.0
2441304	Alpha-BHC	90.9	81.2	P/P	65 - 110
2441304	Alpha-Chlordane	92.6	78.7	P/P	43 - 119
2441304	Beta-BHC	103	93.7	P/P	54 - 165
2441304	Beta-Cyfluthrin	130	98.9	P/P	27 - 165
2441304	Bifenthrin	83.7	70.0	P/P	17 - 117
2441304	Chlorothalonil	155	115	P/P	10 - 255
2441304	Cis-Nonachlor	90.4	65.6	P/P	34 - 98.0
2441304	Cypermethrin	139	116	P/P	25 - 143
2441304	Dacthal	94.3	60.4	P/P	55 - 139
2441304	DDD-p,p'	103	76.7	P/P	30 - 109
2441304	DDE-p,p'	89.2	80.0	P/P	35 - 106
2441304	DDT-p,p'	210	85.9	F/P	41 - 101
2441304	Delta-BHC	119	104	P/P	58 - 165
2441304	Deltamethrin	166	131	P/P	10 - 194
2441304	Dichlobenil	63.4	51.6	P/P	22 - 114
2441304	Dicofol	90.9	77.4	P/P	17 - 133
2441304	Dieldrin	87.3	85.2	P/P	45 - 129
2441304	Endosulfan I	87.4	79.0	P/P	49 - 104
2441304	Endosulfan II	98.7	76.7	P/P	37 - 117
2441304	Endosulfan Sulfate	75.9	81.4	P/P	38 - 128
2441304	Endrin	93.3	78.8	P/P	35 - 116
2441304	Endrin Aldehyde	26.4	60.2	P/P	19 - 108
2441304	Endrin Ketone	93.7	79.0	P/P	44 - 134
2441304	Esfenvalerate	135	106	P/P	27 - 176
2441304	Ethalfuralin	77.6	64.8	P/P	49 - 100
2441304	Fenpropathrin	92.3	82.9	P/P	34 - 117
2441304	Gamma-BHC	123	115	P/P	59 - 129
2441304	Gamma-Chlordane	93.9	79.1	P/P	33 - 107
2441304	Heptachlor	74.4	62.6	P/P	37 - 94.0
2441304	Heptachlor Epoxide	82.8	78.5	P/P	38 - 118
2441304	Hexachlorobenzene	49.2	48.1	P/P	35 - 97.0
2441304	Kepone	117	68.0	P/P	10 - 221
2441304	Lambda-Cyhalothrin	124	91.9	P/P	23 - 190
2441304	Methoprene	84.8	73.1	P/P	21 - 109
2441304	Methoxychlor	105	92.4	P/P	46 - 118
2441304	MGK-264	105	94.9	P/P	39 - 122
2441304	Mirex	68.7	65.4	P/P	25 - 90.0
2441304	Oxychlordane	83.1	79.2	P/P	42 - 100
2441304	Permethrin	107	88.8	P/P	33 - 181
2441304	Phenothrin	91.0	74.8	P/P	12 - 125
2441304	Piperonyl Butoxide	114	111	P/P	10 - 178
2441304	Prallethrin	93.0	80.6	P/P	24 - 122
2441304	Tau-Fluvalinate	122	93.0	P/P	13 - 151
2441304	Tetramethrin	124	107	P/P	16 - 172
2441304	Trans-Nonachlor	92.3	73.1	P/P	39 - 100
2441304	Triclosan Methyl	77.4	68.6	P/P	43 - 110
2441304	Trifluralin	83.4	75.0	P/P	45 - 94.0
2441380	PCB-1016	81.0	85.2	P/P	45 - 107
2441380	PCB-1260	92.9	99.1	P/P	40 - 112

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P436109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2441380	Toxaphene	82.7	93.5	P/P	27 - 156

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P436109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441304	Aldrin	10.5	Spike	P	0 - 41
2441304	Alpha-BHC	11.4	Spike	P	0 - 25
2441304	Alpha-Chlordane	16.2	Spike	P	0 - 32
2441304	Beta-BHC	9.01	Spike	P	0 - 33
2441304	Beta-Cyfluthrin	27.1	Spike	P	0 - 43
2441304	Bifenthrin	17.8	Spike	P	0 - 52
2441304	Chlorothalonil	29.9	Spike	P	0 - 82
2441304	Cis-Nonachlor	31.8	Spike	P	0 - 33
2441304	Cypermethrin	18.1	Spike	P	0 - 51
2441304	Dacthal	43.8	Spike	F	0 - 27
2441304	DDD-p,p'	29.0	Spike	P	0 - 39
2441304	DDE-p,p'	10.9	Spike	P	0 - 31
2441304	DDT-p,p'	84.1	Spike	F	0 - 29
2441304	Delta-BHC	12.9	Spike	P	0 - 35
2441304	Deltamethrin	23.7	Spike	P	0 - 100
2441304	Dichlobenil	20.4	Spike	P	0 - 40
2441304	Dicofol	16.1	Spike	P	0 - 37
2441304	Dieldrin	2.31	Spike	P	0 - 27
2441304	Endosulfan I	10.1	Spike	P	0 - 23
2441304	Endosulfan II	25.1	Spike	P	0 - 34
2441304	Endosulfan Sulfate	7.06	Spike	P	0 - 36
2441304	Endrin	16.9	Spike	P	0 - 45
2441304	Endrin Aldehyde	78.1	Spike	F	0 - 76
2441304	Endrin Ketone	17.1	Spike	P	0 - 43
2441304	Esfenvalerate	23.9	Spike	P	0 - 51
2441304	Ethalfuralin	18.0	Spike	P	0 - 22
2441304	Fenpropathrin	10.7	Spike	P	0 - 49
2441304	Gamma-BHC	6.43	Spike	P	0 - 28
2441304	Gamma-Chlordane	17.1	Spike	P	0 - 40
2441304	Heptachlor	17.2	Spike	P	0 - 29
2441304	Heptachlor Epoxide	5.36	Spike	P	0 - 33
2441304	Hexachlorobenzene	2.16	Spike	P	0 - 36
2441304	Kepone	53.2	Spike	P	0 - 85
2441304	Lambda-Cyhalothrin	29.5	Spike	P	0 - 55
2441304	Methoprene	14.7	Spike	P	0 - 53
2441304	Methoxychlor	12.3	Spike	P	0 - 50
2441304	MGK-264	10.3	Spike	P	0 - 43
2441304	Mirex	4.90	Spike	P	0 - 40
2441304	Oxychlordane	4.84	Spike	P	0 - 31
2441304	Permethrin	19.0	Spike	P	0 - 50
2441304	Phenothrin	19.5	Spike	P	0 - 58
2441304	Piperonyl Butoxide	2.64	Spike	P	0 - 100
2441304	Prallethrin	14.3	Spike	P	0 - 39
2441304	Tau-Fluvalinate	26.8	Spike	P	0 - 54
2441304	Tetramethrin	14.9	Spike	P	0 - 51
2441304	Trans-Nonachlor	23.2	Spike	P	0 - 39
2441304	Triclosan Methyl	12.1	Spike	P	0 - 31
2441304	Trifluralin	10.6	Spike	P	0 - 22
2441380	PCB-1016	4.99	Spike	P	0 - 25
2441380	PCB-1260	6.44	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P436109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2441380	Chlordane	0.277	Spike	P	0 - 28
2441380	Toxaphene	12.3	Spike	P	0 - 27

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

Quality Assurance Report Surrogates

Lab Sample ID: 2441343
Field Sample ID: G4NW0022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	76.3	P	37 - 129
EPA 8270E	Decachlorobiphenyl	54.9	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	57.8	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	59.7	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	51.0	P	28 - 102
EPA 8276	PCNB	113	P	49 - 115

Lab Sample ID: 2441344
Field Sample ID: G4NW0021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	74.6	P	37 - 129
EPA 8270E	Decachlorobiphenyl	76.4	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	54.9	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	56.5	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	53.1	P	28 - 102
EPA 8276	PCNB	97.6	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A122098

Included Lab Sample IDs: 2441343, 2441344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.1		P	80 - 120
Toxaphene	107		P	80 - 120

Reference Method: EPA 8270E

Run ID: A122101

Included Lab Sample IDs: 2441343, 2441344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.1		P	80 - 120
PCB-1260	100		P	80 - 120

Reference Method: EPA 8270E

Run ID: A122105

Included Lab Sample IDs: 2441343, 2441344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	108		P	80 - 120
Alpha-BHC	96.6		P	80 - 120
Alpha-Chlordane	109		P	80 - 120
Beta-BHC	113		P	80 - 120
Beta-Cyfluthrin	104		P	80 - 120
Bifenthrin	91.2		P	80 - 120
Chlorothalonil	81.0		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	91.0		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	113		P	80 - 120
DDE-p,p'	112		P	80 - 120
DDT-p,p'	83.5		P	80 - 120
Delta-BHC	80.9		P	80 - 120
Deltamethrin	103		P	80 - 120
Dichlobenil	92.8		P	80 - 120
Dicofol	95.3		P	80 - 120
Dieldrin	90.8		P	80 - 120
Endosulfan I	83.1		P	80 - 120
Endosulfan II	111		P	80 - 120
Endosulfan Sulfate	107		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	98.0		P	80 - 120
Endrin Ketone	81.9		P	80 - 120
Esfenvalerate	83.1		P	80 - 120
Ethalfuralin	96.9		P	80 - 120
Fenpropathrin	86.2		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	107		P	80 - 120
Heptachlor	81.4		P	80 - 120
Heptachlor Epoxide	87.7		P	80 - 120
Hexachlorobenzene	91.2		P	80 - 120
Kepone	45.6*		F	80 - 120
Lambda-Cyhalothrin	86.5		P	80 - 120
Methoprene	109		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A122105

Included Lab Sample IDs: 2441343, 2441344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	85.1		P	80 - 120
MGK-264	105		P	80 - 120
Mirex	88.0		P	80 - 120
Oxychlordane	88.0		P	80 - 120
Permethrin	90.4		P	80 - 120
Phenothrin	91.4		P	80 - 120
Piperonyl Butoxide	86.8		P	80 - 120
Prallethrin	104		P	80 - 120
Tau-Fluvalinate	81.1		P	80 - 120
Tetramethrin	87.9		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	85.9		P	80 - 120
Trifluralin	103		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			
EPA 8270E	Aldrin	88.9	73.0	65.7		10.5
	Alpha-BHC	94.5	90.9	81.2		11.4
	Alpha-Chlordane	103	92.6	78.7		16.2
	Beta-BHC	74.3	103	93.7		9.01
	Beta-Cyfluthrin	82.8	130	98.9		27.1
	Bifenthrin	91.0	83.7	70.0		17.8
	Chlorothalonil	68.5	155	115		29.9
	Cis-Nonachlor	101	90.4	65.6		31.8
	Cypermethrin	93.5	139	116		18.1
	Dacthal	95.1	94.3	60.4		43.8
	DDD-p,p'	103	103	76.7		29.0
	DDE-p,p'	104	89.2	80.0		10.9
	DDT-p,p'	94.3	210	85.9		84.1
	Delta-BHC	81.0	119	104		12.9
	Deltamethrin	77.0	166	131		23.7
	Dichlobenil	84.1	63.4	51.6		20.4
	Dicofol	87.1	90.9	77.4		16.1
	Dieldrin	95.3	87.3	85.2		2.31
	Endosulfan I	91.1	87.4	79.0		10.1
	Endosulfan II	99.4	98.7	76.7		25.1
	Endosulfan Sulfate	96.6	75.9	81.4		7.06
	Endrin	105	93.3	78.8		16.9
	Endrin Aldehyde	95.1	26.4	60.2		78.1
	Endrin Ketone	87.7	93.7	79.0		17.1
	Esfenvalerate	85.6	135	106		23.9
	Ethalfuralin	90.6	77.6	64.8		18.0
	Fenpropathrin	86.6	92.3	82.9		10.7
	Gamma-BHC	84.5	123	115		6.43
	Gamma-Chlordane	99.2	93.9	79.1		17.1
	Heptachlor	79.5	74.4	62.6		17.2
	Heptachlor Epoxide	92.7	82.8	78.5		5.36
	Hexachlorobenzene	78.3	49.2	48.1		2.16
	Kepone	13.0	117	68.0		53.2
	Lambda-Cyhalothrin	89.5	124	91.9		29.5
	Methoprene	100	84.8	73.1		14.7
	Methoxychlor	89.8	105	92.4		12.3
	MGK-264	89.6	105	94.9		10.3
	Mirex	97.3	68.7	65.4		4.90
	Oxychlordane	91.4	83.1	79.2		4.84
	PCB-1016	79.7	81.0	85.2		4.99
	PCB-1260	84.7	92.9	99.1		6.44
	Permethrin	91.2	107	88.8		19.0
	Phenothrin	88.3	91.0	74.8		19.5
	Piperonyl Butoxide	60.1	114	111		2.64
	Prallethrin	89.9	93.0	80.6		14.3
	Tau-Fluvalinate	83.3	122	93.0		26.8
	Tetramethrin	72.3	124	107		14.9
	Trans-Nonachlor	94.7	92.3	73.1		23.2
	Triclosan Methyl	85.2	77.4	68.6		12.1
	Trifluralin	93.3	83.4	75.0		10.6
EPA 8276	Chlordane	88.5				0.277
	Toxaphene	110	82.7	93.5		12.3

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2441343, 2441344
EPA 8270E	PCBs in water matrices by GC/MS/MS	2441343, 2441344
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2441343, 2441344

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/06/2023 23:53	Julie Wi	2441343
	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/07/2023 00:23	Julie Wi	2441344
	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/09/2023 03:08	Julie Wi	2441343
	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/09/2023 03:40	Julie Wi	2441344
EPA 8276	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/10/2023 16:10	Arthur Maknenko	2441343
	09/28/2023	10/03/2023 08:30	Rasheda Ghaffari	10/10/2023 17:08	Arthur Maknenko	2441344