

Chemical Analysis Report

NE-DIST-2023-06-14-01

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

Event Description: **LSJR North 2 2023**
Request ID: **RQ-2023-06-12-10**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 29-JUN-2023 13:50



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: HIGHLANDS CR AT BROWARD RD

Collection Date/Time: 06/13/2023 09:00

Field ID: 20030025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2417294	EPA 200.7 Rev. 4.4	Calcium	209		mg/L	P431440	
		Iron	260	I	ug/L	P431440	
		Magnesium	595		mg/L	P431440	
		Potassium	175		mg/L	P431440	
		Sodium	4.61E+03		mg/L	P431440	
		Strontium	3.81E+03		ug/L	P431440	
		Tin	150	U	ug/L	P431440	
		Titanium	4.5	I	ug/L	P431440	
		Vanadium	6.0	U	ug/L	P431440	
		Zinc	18	I	ug/L	P431440	
	EPA 200.8 Rev. 5.4	Aluminum	253		ug/L	P431440	
		Antimony	0.48	I	ug/L	P431440	
		Arsenic	2.22		ug/L	P431440	
		Barium	34.5		ug/L	P431440	
		Beryllium	0.041	I	ug/L	P431440	
		Boron	2.01E+03		ug/L	P431440	
		Cadmium	0.080	U	ug/L	P431440	
		Chromium	4.0	U	ug/L	P431440	
		Cobalt	0.33		ug/L	P431440	
		Copper	1.6	U	ug/L	P431440	
		Lead	0.81	I	ug/L	P431440	
		Manganese	36.6		ug/L	P431440	
		Molybdenum	5.8		ug/L	P431440	
		Nickel	2.0	U	ug/L	P431440	
		Selenium	0.80	U	ug/L	P431440	
		Silver	0.040	U	ug/L	P431440	
		Thallium	0.40	U	ug/L	P431440	
	SM 2340 B-2011	Hardness	2.97E+03		mg/L	P431440	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Sample Location: BLOCKHOUSE CR AT LEONID RD

Collection Date/Time: 06/13/2023 09:20

Field ID: 20030027FLA

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2417291	EPA 8270E	Aldrin	0.70	U	ng/L	P431247	
		Alpha-BHC	0.11	U	ng/L	P431247	
		Alpha-Chlordane	0.24	I	ng/L	P431247	
		PCB-1016	2.1	U	ng/L	P431247	
		Beta-BHC	0.11	U	ng/L	P431247	
		PCB-1221	2.1	U	ng/L	P431247	
		Beta-Cyfluthrin	1.3	U	ng/L	P431247	
		PCB-1232	2.1	U	ng/L	P431247	
		Bifenthrin	0.54	U	ng/L	P431247	
		PCB-1242	2.1	U	ng/L	P431247	
		PCB-1248	2.1	U	ng/L	P431247	
		Chlorothalonil	3.9	U	ng/L	P431247	
		PCB-1254	2.1	U	ng/L	P431247	
		Cis-Nonachlor	0.21	U	ng/L	P431247	
		PCB-1260	2.1	U	ng/L	P431247	
		Cypermethrin	1.6	U	ng/L	P431247	
		Dacthal	0.16	UJ	ng/L	P431247	LCS
		DDD-p,p'	0.27	U	ng/L	P431247	
		DDE-p,p'	0.21	U	ng/L	P431247	
		DDT-p,p'	0.27	I	ng/L	P431247	
		Delta-BHC	0.43	U	ng/L	P431247	
		Deltamethrin	1.3	U	ng/L	P431247	
		Dichlobenil	0.27	U	ng/L	P431247	
		Dicofol	1.3	U	ng/L	P431247	
		Dieldrin	0.43	U	ng/L	P431247	
		Endosulfan I	0.43	U	ng/L	P431247	
		Endosulfan II	0.43	U	ng/L	P431247	
		Endosulfan Sulfate	0.32	U	ng/L	P431247	
		Endrin	0.43	U	ng/L	P431247	
		Endrin Aldehyde	0.80	U	ng/L	P431247	
		Endrin Ketone	0.43	U	ng/L	P431247	
		Esfenvalerate	0.80	U	ng/L	P431247	
		Ethalfuralin	0.16	U	ng/L	P431247	
		Fenpropathrin	0.27	U	ng/L	P431247	
		Gamma-BHC	0.13	U	ng/L	P431247	RPD
		Gamma-Chlordane	0.25	I	ng/L	P431247	
		Heptachlor	0.21	U	ng/L	P431247	
		Heptachlor Epoxide	0.27	U	ng/L	P431247	
		Hexachlorobenzene**	1.1	U	ng/L	P431247	
		Kepone	5.4	U	ng/L	P431247	
		Lambda-Cyhalothrin	0.80	U	ng/L	P431247	
		Methoprene	0.80	U	ng/L	P431247	
		Methoxychlor	0.32	U	ng/L	P431247	
		MGK-264	0.27	I	ng/L	P431247	

Field ID: 20030027FLA

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2417291	EPA 8270E	Mirex	0.37	U	ng/L	P431247	
		Oxychlordane	0.32	U	ng/L	P431247	
		Permethrin	1.7	U	ng/L	P431247	
		Phenothrin	0.96	U	ng/L	P431247	
		Piperonyl Butoxide	0.49	I	ng/L	P431247	
		Prallethrin	2.1	U	ng/L	P431247	
		Tau-Fluvalinate	0.27	U	ng/L	P431247	
		Tetramethrin	0.80	U	ng/L	P431247	
		Trans-Nonachlor	0.21	U	ng/L	P431247	RPD
		Triclosan Methyl	0.16	U	ng/L	P431247	
		Trifluralin	0.21	U	ng/L	P431247	
	EPA 8276	Chlordane	2.1	UJ	ng/L	P431247	LCS, MS
		Toxaphene	16	U	ng/L	P431247	
2417293	EPA 200.7 Rev. 4.4	Calcium	109		mg/L	P431440	
		Iron	700		ug/L	P431440	
		Magnesium	285		mg/L	P431440	
		Potassium	83		mg/L	P431440	
		Sodium	2.20E+03		mg/L	P431440	
		Strontium	1.81E+03		ug/L	P431440	
		Tin	9.0	U	ug/L	P431440	
		Titanium	3.6	I	ug/L	P431440	
		Vanadium	6.0	U	ug/L	P431440	
		Zinc	15	U	ug/L	P431440	
	EPA 200.8 Rev. 5.4	Aluminum	199		ug/L	P431440	
		Antimony	0.20	U	ug/L	P431440	
		Arsenic	1.76		ug/L	P431440	
		Barium	33.0		ug/L	P431440	
		Beryllium	0.040	U	ug/L	P431440	
		Boron	951		ug/L	P431440	
		Cadmium	0.080	U	ug/L	P431440	
		Chromium	4.0	U	ug/L	P431440	
		Cobalt	0.24	I	ug/L	P431440	
		Copper	1.6	U	ug/L	P431440	
		Lead	0.90	I	ug/L	P431440	
		Manganese	47.3		ug/L	P431440	
		Molybdenum	2.6		ug/L	P431440	
		Nickel	2.0	U	ug/L	P431440	
		Selenium	0.80	U	ug/L	P431440	
	SM 2340 B-2011	Silver	0.040	U	ug/L	P431440	
		Thallium	0.40	U	ug/L	P431440	
		Hardness	1.44E+03		mg/L	P431440	

Ref. Method and Comment:

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

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Sample Location: BLOCKHOUSE 100M ABV IRMA RD

Collection Date/Time: 06/13/2023 09:40

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2417292	EPA 8270E	Aldrin	0.67	U	ng/L	P431247	
		Alpha-BHC	0.10	U	ng/L	P431247	
		Alpha-Chlordane	0.21	U	ng/L	P431247	
		PCB-1016	2.1	U	ng/L	P431247	
		Beta-BHC	0.10	U	ng/L	P431247	
		PCB-1221	2.1	U	ng/L	P431247	
		Beta-Cyfluthrin	1.3	U	ng/L	P431247	
		PCB-1232	2.1	U	ng/L	P431247	
		Bifenthrin	1.3	I	ng/L	P431247	
		PCB-1242	2.1	U	ng/L	P431247	
		PCB-1248	2.1	U	ng/L	P431247	
		Chlorothalonil	3.7	U	ng/L	P431247	
		PCB-1254	2.1	U	ng/L	P431247	
		Cis-Nonachlor	0.21	U	ng/L	P431247	
		PCB-1260	2.1	U	ng/L	P431247	
		Cypermethrin	1.5	U	ng/L	P431247	
		Dacthal	0.15	UJ	ng/L	P431247	LCS
		DDD-p,p'	0.26	U	ng/L	P431247	
		DDE-p,p'	0.21	U	ng/L	P431247	
		DDT-p,p'	0.26	U	ng/L	P431247	
		Delta-BHC	0.41	U	ng/L	P431247	
		Deltamethrin	1.3	U	ng/L	P431247	
		Dichlobenil	0.26	U	ng/L	P431247	
		Dicofol	1.3	U	ng/L	P431247	
		Dieldrin	0.41	U	ng/L	P431247	
		Endosulfan I	0.41	U	ng/L	P431247	
		Endosulfan II	0.41	U	ng/L	P431247	
		Endosulfan Sulfate	0.31	U	ng/L	P431247	
		Endrin	0.41	U	ng/L	P431247	
		Endrin Aldehyde	0.77	U	ng/L	P431247	
		Endrin Ketone	0.41	U	ng/L	P431247	
		Esfenvalerate	0.77	U	ng/L	P431247	
		Ethalfuralin	0.15	U	ng/L	P431247	
		Fenpropathrin	0.26	U	ng/L	P431247	
		Gamma-BHC	0.13	U	ng/L	P431247	RPD
		Gamma-Chlordane	0.22	I	ng/L	P431247	
		Heptachlor	0.21	U	ng/L	P431247	
		Heptachlor Epoxide	0.26	U	ng/L	P431247	
		Hexachlorobenzene**	1.0	U	ng/L	P431247	
		Kepone	5.1	U	ng/L	P431247	
		Lambda-Cyhalothrin	0.77	U	ng/L	P431247	
		Methoprene	0.77	U	ng/L	P431247	
		Methoxychlor	0.31	U	ng/L	P431247	
		MGK-264	0.21	U	ng/L	P431247	

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2417292	EPA 8270E	Mirex	0.36	U	ng/L	P431247	
		Oxychlordane	0.31	U	ng/L	P431247	
		Permethrin	1.6	U	ng/L	P431247	
		Phenothrin	0.92	U	ng/L	P431247	
		Piperonyl Butoxide	0.63	I	ng/L	P431247	
		Prallethrin	2.1	U	ng/L	P431247	
		Tau-Fluvalinate	0.26	U	ng/L	P431247	
		Tetramethrin	0.77	U	ng/L	P431247	
		Trans-Nonachlor	0.21	U	ng/L	P431247	RPD
		Triclosan Methyl	0.15	U	ng/L	P431247	
		Trifluralin	0.21	U	ng/L	P431247	
	EPA 8276	Chlordane	2.1	UJ	ng/L	P431247	LCS, MS
		Toxaphene	15	U	ng/L	P431247	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8276: 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: P431440

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: P431440

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: P431247

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P431247

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P431247

Component	Result	Code	Units
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	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	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: P431247

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P431440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	101		P	85 - 115
Sodium	96.7		P	85 - 115
Strontium	101		P	85 - 115
Tin	103		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P431440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	102		P	85 - 115
Barium	102		P	85 - 115
Beryllium	95.6		P	85 - 115
Boron	105		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	99.7		P	85 - 115
Copper	99.2		P	85 - 115
Lead	94.6		P	85 - 115
Manganese	99.9		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	100		P	85 - 115
Selenium	100		P	85 - 115
Silver	105		P	85 - 115
Thallium	98.8		P	85 - 115

Reference Method: EPA 8270E
Batch ID: P431247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	44.0		P	10 - 92.0
Alpha-BHC	75.4		P	75 - 107
Alpha-Chlordane	60.4		P	50 - 108
Beta-BHC	82.7		P	36 - 138
Beta-Cyfluthrin	66.9		P	20 - 161
Bifenthrin	62.4		P	10 - 119
Chlorothalonil	91.0		P	26 - 186
Cis-Nonachlor	50.6		P	42 - 119
Cypermethrin	66.2		P	22 - 150
Dacthal	70.3		F	72 - 119
DDD-p,p'	62.5		P	45 - 107
DDE-p,p'	60.8		P	48 - 106
DDT-p,p'	61.4		P	48 - 110
Delta-BHC	96.8		P	54 - 140
Deltamethrin	82.8		P	22 - 189

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P431247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dichlobenil	73.5		P	36 - 117
Dicofol	62.5		P	46 - 155
Dieldrin	57.1		P	54 - 110
Endosulfan I	62.8		P	59 - 105
Endosulfan II	55.3		P	51 - 118
Endosulfan Sulfate	57.7		P	57 - 121
Endrin	57.6		P	10 - 120
Endrin Aldehyde	59.3		P	34 - 118
Endrin Ketone	77.3		P	69 - 177
Esfenvalerate	91.8		P	23 - 168
Ethalfuralin	59.6		P	49 - 99.0
Fenpropathrin	61.3		P	34 - 117
Gamma-BHC	80.4		P	72 - 117
Gamma-Chlordane	63.0		P	43 - 106
Heptachlor	53.4		P	41 - 98.0
Heptachlor Epoxide	77.2		P	57 - 106
Hexachlorobenzene	51.9		P	36 - 99.0
Kepone	53.5		P	16 - 215
Lambda-Cyhalothrin	79.9		P	21 - 177
Methoprene	42.6		P	10 - 119
Methoxychlor	69.5		P	60 - 112
MGK-264	49.2		P	26 - 122
Mirex	59.2		P	10 - 169
Oxychlordane	53.2		P	43 - 105
PCB-1016	71.3		P	48 - 112
PCB-1260	65.5		P	44 - 118
Permethrin	60.2		P	24 - 148
Phenothrin	79.0		P	10 - 106
Piperonyl Butoxide	75.7		P	10 - 139
Prallethrin	52.9		P	17 - 109
Tau-Fluvalinate	76.3		P	13 - 131
Tetramethrin	67.7		P	10 - 132
Trans-Nonachlor	56.2		P	44 - 106
Triclosan Methyl	69.8		P	59 - 109
Trifluralin	66.4		P	44 - 101

Reference Method: EPA 8276
Batch ID: P431247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	59.2		F	61 - 116
Toxaphene	64.1		P	48 - 124

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P431440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2417073	Calcium	105		P	70 - 130
2417073	Iron	106	106	P/P	70 - 130
2417073	Strontium	103	104	P/P	70 - 130
2417073	Tin	94.9	96.7	P/P	70 - 130
2417073	Titanium	103	106	P/P	70 - 130
2417073	Vanadium	101	103	P/P	70 - 130
2417073	Zinc	103	103	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P431440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2417073	Aluminum	96.7	97.3	P/P	70 - 130
2417073	Antimony	101	102	P/P	70 - 130
2417073	Arsenic	104	105	P/P	70 - 130
2417073	Barium	101	98.7	P/P	70 - 130
2417073	Beryllium	102	104	P/P	70 - 130
2417073	Boron	103	104	P/P	70 - 130
2417073	Cadmium	99.2	100	P/P	70 - 130
2417073	Chromium	98.0	95.9	P/P	70 - 130
2417073	Cobalt	96.8	97.4	P/P	70 - 130
2417073	Copper	98.9	95.5	P/P	70 - 130
2417073	Lead	94.4	94.4	P/P	70 - 130
2417073	Manganese	94.4	92.8	P/P	70 - 130
2417073	Molybdenum	102	103	P/P	70 - 130
2417073	Nickel	96.3	95.4	P/P	70 - 130
2417073	Selenium	100	97.8	P/P	70 - 130
2417073	Silver	96.0	98.4	P/P	70 - 130
2417073	Thallium	94.2	97.2	P/P	70 - 130

Reference Method: EPA 8270E

Batch ID: P431247

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416653	PCB-1016	92.2	104	P/P	46 - 111
2416653	PCB-1260	83.8	106	P/P	45 - 114
2417276	Aldrin	53.3	51.3	P/P	20 - 82.0
2417276	Alpha-BHC	97.0	87.4	P/P	71 - 109
2417276	Alpha-Chlordane	75.0	53.6	P/P	42 - 106
2417276	Beta-BHC	103	92.2	P/P	69 - 180
2417276	Beta-Cyfluthrin	79.7	66.2	P/P	18 - 175
2417276	Bifenthrin	108	80.4	P/P	21 - 128
2417276	Chlorothalonil	193	132	P/P	10 - 300
2417276	Cis-Nonachlor	72.1	66.3	P/P	34 - 106
2417276	Cypermethrin	83.1	66.0	P/P	22 - 158
2417276	Dacthal	116	90.7	P/P	54 - 116
2417276	DDD-p,p'	106	85.6	P/P	34 - 107
2417276	DDE-p,p'	102	75.1	P/P	33 - 110
2417276	DDT-p,p'	70.4	60.0	P/P	50 - 122
2417276	Delta-BHC	143	105	P/P	77 - 193
2417276	Deltamethrin	110	103	P/P	10 - 195
2417276	Dichlobenil	39.1	45.6	P/P	25 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P431247

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2417276	Dicofol	84.2	73.9	P/P	38 - 247
2417276	Dieldrin	75.8	67.2	P/P	45 - 118
2417276	Endosulfan I	80.5	72.8	P/P	51 - 106
2417276	Endosulfan II	61.1	59.6	P/P	37 - 122
2417276	Endosulfan Sulfate	77.2	59.9	P/P	43 - 132
2417276	Endrin	66.9	64.9	P/P	29 - 101
2417276	Endrin Aldehyde	87.5	64.6	P/P	19 - 110
2417276	Endrin Ketone	77.9	68.5	P/P	60 - 140
2417276	Esfenvalerate	118	128	P/P	26 - 199
2417276	Ethalfuralin	62.8	62.9	P/P	45 - 99.0
2417276	Fenpropathrin	74.0	65.4	P/P	35 - 120
2417276	Gamma-BHC	115	91.4	P/P	63 - 128
2417276	Gamma-Chlordane	64.3	46.1	P/P	40 - 104
2417276	Heptachlor	56.9	56.4	P/P	36 - 97.0
2417276	Heptachlor Epoxide	76.9	67.8	P/P	49 - 184
2417276	Hexachlorobenzene	81.0	57.8	P/P	39 - 96.0
2417276	Kepone	93.4	54.8	P/P	10 - 217
2417276	Lambda-Cyhalothrin	190	155	P/P	21 - 193
2417276	Methoprene	47.4	41.9	P/P	20 - 106
2417276	Methoxychlor	83.0	75.2	P/P	53 - 118
2417276	MGK-264	57.9	55.7	P/P	40 - 118
2417276	Mirex	86.7	68.8	P/P	26 - 92.0
2417276	Oxychlordane	47.8	47.4	P/P	44 - 99.0
2417276	Permethrin	75.7	79.4	P/P	33 - 182
2417276	Phenothrin	115	107	P/P	10 - 129
2417276	Piperonyl Butoxide	113	105	P/P	10 - 211
2417276	Prallethrin	45.2	44.4	P/P	24 - 113
2417276	Tau-Fluvalinate	148	138	P/P	14 - 149
2417276	Tetramethrin	83.3	72.4	P/P	17 - 151
2417276	Trans-Nonachlor	71.5	45.6	P/P	42 - 102
2417276	Triclosan Methyl	81.1	69.3	P/P	48 - 108
2417276	Trifluralin	54.2	56.2	P/P	47 - 96.0

Reference Method: EPA 8276
Batch ID: P431247

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2416653	Chlordane	47.4	42.8	F/F	53 - 126
2416653	Toxaphene	58.9	59.9	P/P	56 - 211

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P431440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2417073	Calcium	0.420	Spike	P	0 - 20
2417073	Iron	0.0474	Spike	P	0 - 20
2417073	Magnesium	0.629	Spike	P	0 - 20
2417073	Potassium	0.539	Spike	P	0 - 20
2417073	Sodium	13.2	Spike	P	0 - 20
2417073	Strontium	0.969	Spike	P	0 - 20
2417073	Tin	1.91	Spike	P	0 - 20
2417073	Titanium	2.93	Spike	P	0 - 20
2417073	Vanadium	1.68	Spike	P	0 - 20
2417073	Zinc	0.481	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P431440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2417073	Aluminum	0.667	Spike	P	0 - 20
2417073	Antimony	0.895	Spike	P	0 - 20
2417073	Arsenic	1.14	Spike	P	0 - 20
2417073	Barium	1.90	Spike	P	0 - 20
2417073	Beryllium	2.41	Spike	P	0 - 20
2417073	Boron	0.526	Spike	P	0 - 20
2417073	Cadmium	1.17	Spike	P	0 - 20
2417073	Chromium	2.18	Spike	P	0 - 20
2417073	Cobalt	0.582	Spike	P	0 - 20
2417073	Copper	3.50	Spike	P	0 - 20
2417073	Lead	0.0583	Spike	P	0 - 20
2417073	Manganese	1.60	Spike	P	0 - 20
2417073	Molybdenum	1.28	Spike	P	0 - 20
2417073	Nickel	1.01	Spike	P	0 - 20
2417073	Selenium	2.20	Spike	P	0 - 20
2417073	Silver	2.46	Spike	P	0 - 20
2417073	Thallium	3.13	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P431247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416653	PCB-1016	11.7	Spike	P	0 - 32
2416653	PCB-1260	23.7	Spike	P	0 - 31
2417276	Aldrin	3.82	Spike	P	0 - 41
2417276	Alpha-BHC	10.4	Spike	P	0 - 25
2417276	Alpha-Chlordane	30.2	Spike	P	0 - 33
2417276	Beta-BHC	11.4	Spike	P	0 - 36
2417276	Beta-Cyfluthrin	18.6	Spike	P	0 - 42
2417276	Bifenthrin	29.2	Spike	P	0 - 53
2417276	Chlorothalonil	37.7	Spike	P	0 - 71
2417276	Cis-Nonachlor	8.40	Spike	P	0 - 29
2417276	Cypermethrin	23.0	Spike	P	0 - 40
2417276	Dacthal	24.3	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P431247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2417276	DDD-p,p'	20.9	Spike	P	0 - 39
2417276	DDE-p,p'	30.3	Spike	P	0 - 33
2417276	DDT-p,p'	16.0	Spike	P	0 - 40
2417276	Delta-BHC	31.3	Spike	P	0 - 37
2417276	Deltamethrin	6.79	Spike	P	0 - 100
2417276	Dichlobenil	15.2	Spike	P	0 - 40
2417276	Dicofol	13.1	Spike	P	0 - 31
2417276	Dieldrin	12.1	Spike	P	0 - 27
2417276	Endosulfan I	10.1	Spike	P	0 - 23
2417276	Endosulfan II	2.46	Spike	P	0 - 28
2417276	Endosulfan Sulfate	25.2	Spike	P	0 - 38
2417276	Endrin	3.06	Spike	P	0 - 63
2417276	Endrin Aldehyde	30.1	Spike	P	0 - 60
2417276	Endrin Ketone	12.9	Spike	P	0 - 37
2417276	Esfenvalerate	8.39	Spike	P	0 - 52
2417276	Ethalfuralin	0.0547	Spike	P	0 - 23
2417276	Fenpropathrin	12.3	Spike	P	0 - 32
2417276	Gamma-BHC	23.0	Spike	F	0 - 17
2417276	Gamma-Chlordane	29.6	Spike	P	0 - 40
2417276	Heptachlor	0.808	Spike	P	0 - 29
2417276	Heptachlor Epoxide	12.6	Spike	P	0 - 25
2417276	Hexachlorobenzene	33.6	Spike	P	0 - 36
2417276	Kepone	52.1	Spike	P	0 - 93
2417276	Lambda-Cyhalothrin	20.4	Spike	P	0 - 55
2417276	Methoprene	12.4	Spike	P	0 - 53
2417276	Methoxychlor	9.94	Spike	P	0 - 29
2417276	MGK-264	3.83	Spike	P	0 - 35
2417276	Mirex	23.0	Spike	P	0 - 46
2417276	Oxychlordane	0.863	Spike	P	0 - 29
2417276	Permethrin	4.69	Spike	P	0 - 44
2417276	Phenothrin	6.97	Spike	P	0 - 56
2417276	Piperonyl Butoxide	7.22	Spike	P	0 - 100
2417276	Prallethrin	1.67	Spike	P	0 - 42
2417276	Tau-Fluvalinate	6.75	Spike	P	0 - 54
2417276	Tetramethrin	13.9	Spike	P	0 - 51
2417276	Trans-Nonachlor	44.3	Spike	F	0 - 37
2417276	Triclosan Methyl	15.7	Spike	P	0 - 31
2417276	Trifluralin	3.71	Spike	P	0 - 30

Reference Method: EPA 8276
Batch ID: P431247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2416653	Chlordane	10.3	Spike	P	0 - 25
2416653	Toxaphene	1.57	Spike	P	0 - 26

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

Quality Assurance Report Surrogates

Lab Sample ID: 2417291
Field Sample ID: 20030027FLA

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	99.4	P	29 - 130
EPA 8270E	Decachlorobiphenyl	93.1	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	59.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	51.2	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	43.7	P	30 - 101
EPA 8276	PCNB	92.8	P	48 - 121

Lab Sample ID: 2417292
Field Sample ID: G2NE1159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	115	P	29 - 130
EPA 8270E	Decachlorobiphenyl	82.6	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	66.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	67.2	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	73.6	P	30 - 101
EPA 8276	PCNB	98.7	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A119931

Included Lab Sample IDs: 2417293, 2417294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.4	99.3	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Barium	98.2	99.4	P/P	90 - 110
Beryllium	101	102	P/P	90 - 110
Boron	99.4	99.5	P/P	90 - 110
Boron	99.5	99.6	P/P	90 - 110
Cadmium	101	99.5	P/P	90 - 110
Chromium	102	103	P/P	90 - 110
Cobalt	100	101	P/P	90 - 110
Copper	99.0	98.6	P/P	90 - 110
Lead	93.7	93.5	P/P	90 - 110
Manganese	101	103	P/P	90 - 110
Molybdenum	98.6	98.8	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	103	104	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119936

Included Lab Sample IDs: 2417291, 2417292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	89.8		P	80 - 120
PCB-1260	105		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A119954

Included Lab Sample IDs: 2417293, 2417294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Calcium	102	101	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	101	99.9	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	98.5	98.5	P/P	90 - 110
Potassium	98.5	98.0	P/P	90 - 110
Sodium	95.5	96.1	P/P	90 - 110
Sodium	96.1	95.7	P/P	90 - 110
Strontium	101	99.4	P/P	90 - 110
Strontium	99.4	101	P/P	90 - 110
Tin	102	103	P/P	90 - 110
Tin	103	102	P/P	90 - 110
Titanium	101	101	P/P	90 - 110
Titanium	101	101	P/P	90 - 110
Vanadium	100	100	P/P	90 - 110
Vanadium	100	100	P/P	90 - 110
Zinc	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A119954

Included Lab Sample IDs: 2417293, 2417294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	104	103	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A120020

Included Lab Sample IDs: 2417291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.5		P	80 - 120
Toxaphene	102		P	80 - 120

Reference Method: EPA 8270E

Run ID: A120024

Included Lab Sample IDs: 2417291, 2417292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	108		P	80 - 120
Alpha-Chlordane	112		P	80 - 120
Beta-BHC	116		P	80 - 120
Beta-Cyfluthrin	88.9		P	80 - 120
Bifenthrin	97.9		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cis-Nonachlor	115		P	80 - 120
Cypermethrin	98.9		P	80 - 120
Dacthal	96.7		P	80 - 120
DDD-p,p'	107		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	97.6		P	80 - 120
Delta-BHC	110		P	80 - 120
Deltamethrin	90.7		P	80 - 120
Dichlobenil	109		P	80 - 120
Dicofol	93.0		P	80 - 120
Dieldrin	97.6		P	80 - 120
Endosulfan I	105		P	80 - 120
Endosulfan II	108		P	80 - 120
Endosulfan Sulfate	98.5		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	116		P	80 - 120
Endrin Ketone	108		P	80 - 120
Esfenvalerate	93.4		P	80 - 120
Ethalfuralin	97.5		P	80 - 120
Fenpropathrin	97.7		P	80 - 120
Gamma-BHC	106		P	80 - 120
Gamma-Chlordane	113		P	80 - 120
Heptachlor	99.6		P	80 - 120
Heptachlor Epoxide	120		P	80 - 120
Hexachlorobenzene	111		P	80 - 120
Kepone	93.3		P	80 - 120
Lambda-Cyhalothrin	114		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A120024

Included Lab Sample IDs: 2417291, 2417292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MGK-264	94.1		P	80 - 120
Mirex	114		P	80 - 120
Oxychlordane	102		P	80 - 120
Permethrin	94.6		P	80 - 120
Phenothrin	103		P	80 - 120
Piperonyl Butoxide	94.2		P	80 - 120
Prallethrin	111		P	80 - 120
Tau-Fluvalinate	83.9		P	80 - 120
Tetramethrin	99.4		P	80 - 120
Trans-Nonachlor	107		P	80 - 120
Triclosan Methyl	118		P	80 - 120
Trifluralin	97.5		P	80 - 120

Reference Method: EPA 8276

Run ID: A120026

Included Lab Sample IDs: 2417292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.6		P	80 - 120
Toxaphene	99.2		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 200.7 Rev. 4.4	Calcium	102	105				0.420
	Iron	105	106	106			0.0474
	Magnesium	102					0.629
	Potassium	101					0.539
	Sodium	96.7					13.2
	Strontium	101	103	104			0.969
	Tin	103	94.9	96.7			1.91
	Titanium	101	106	103			2.93
	Vanadium	100	101	103			1.68
	Zinc	104	103	103			0.481
EPA 200.8 Rev. 5.4	Aluminum	100	96.7	97.3			0.667
	Antimony	101	101	102			0.895
	Arsenic	102	104	105			1.14
	Barium	102	101	98.7			1.90
	Beryllium	95.6	102	104			2.41
	Boron	105	103	104			0.526
	Cadmium	102	99.2	100			1.17
	Chromium	101	98.0	95.9			2.18
	Cobalt	99.7	96.8	97.4			0.582
	Copper	99.2	98.9	95.5			3.50
	Lead	94.6	94.4	94.4			0.0583
	Manganese	99.9	94.4	92.8			1.60
	Molybdenum	100	102	103			1.28
	Nickel	100	96.3	95.4			1.01
	Selenium	100	100	97.8			2.20
	Silver	105	96.0	98.4			2.46
	Thallium	98.8	94.2	97.2			3.13
	Aldrin	44.0	53.3	51.3			3.82
	Alpha-BHC	75.4	97.0	87.4			10.4
	Alpha-Chlordane	60.4	75.0	53.6			30.2
	Beta-BHC	82.7	103	92.2			11.4
EPA 8270E	Beta-Cyfluthrin	66.9	79.7	66.2			18.6
	Bifenthrin	62.4	108	80.4			29.2
	Chlorothalonil	91.0	193	132			37.7
	Cis-Nonachlor	50.6	72.1	66.3			8.40
	Cypermethrin	66.2	83.1	66.0			23.0
	Dacthal	70.3	116	90.7			24.3
	DDD-p,p'	62.5	106	85.6			20.9
	DDE-p,p'	60.8	102	75.1			30.3
	DDT-p,p'	61.4	70.4	60.0			16.0
	Delta-BHC	96.8	143	105			31.3
	Deltamethrin	82.8	110	103			6.79
	Dichlobenil	73.5	39.1	45.6			15.2
	Dicofol	62.5	84.2	73.9			13.1
	Dieldrin	57.1	75.8	67.2			12.1
	Endosulfan I	62.8	80.5	72.8			10.1
	Endosulfan II	55.3	61.1	59.6			2.46
	Endosulfan Sulfate	57.7	77.2	59.9			25.2
	Endrin	57.6	66.9	64.9			3.06
	Endrin Aldehyde	59.3	87.5	64.6			30.1
	Endrin Ketone	77.3	77.9	68.5			12.9
	Esfenvalerate	91.8	118	128			8.39
	Ethalfuralin	59.6	62.8	62.9			0.0547
	Fenpropathrin	61.3	74.0	65.4			12.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Gamma-BHC	80.4	115	91.4		23.0
	Gamma-Chlordane	63.0	64.3	46.1		29.6
	Heptachlor	53.4	56.9	56.4		0.808
	Heptachlor Epoxide	77.2	76.9	67.8		12.6
	Hexachlorobenzene	51.9	81.0	57.8		33.6
	Kepone	53.5	93.4	54.8		52.1
	Lambda-Cyhalothrin	79.9	190	155		20.4
	Methoprene	42.6	47.4	41.9		12.4
	Methoxychlor	69.5	83.0	75.2		9.94
	MGK-264	49.2	57.9	55.7		3.83
	Mirex	59.2	86.7	68.8		23.0
	Oxychlordane	53.2	47.8	47.4		0.863
	PCB-1016	71.3	92.2	104		11.7
	PCB-1260	65.5	83.8	106		23.7
	Permethrin	60.2	75.7	79.4		4.69
	Phenothrin	79.0	115	107		6.97
	Piperonyl Butoxide	75.7	113	105		7.22
	Prallethrin	52.9	45.2	44.4		1.67
	Tau-Fluvalinate	76.3	148	138		6.75
	Tetramethrin	67.7	83.3	72.4		13.9
	Trans-Nonachlor	56.2	71.5	45.6		44.3
	Triclosan Methyl	69.8	81.1	69.3		15.7
	Trifluralin	66.4	54.2	56.2		3.71
EPA 8276	Chlordane	59.2	47.4	42.8		10.3
	Toxaphene	64.1	58.9	59.9		1.57

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	2417293, 2417294
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2417293, 2417294
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2417291, 2417292
EPA 8270E	PCBs in water matrices by GC/MS/MS	2417291, 2417292
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2417291, 2417292
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2417293, 2417294

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	06/14/2023	06/19/2023 12:45	George D Taylor	06/21/2023 22:10	McKinley C Carter	2417293
	06/14/2023	06/19/2023 12:45	George D Taylor	06/21/2023 22:21	McKinley C Carter	2417293
	06/14/2023	06/19/2023 12:45	George D Taylor	06/21/2023 22:56	McKinley C Carter	2417294
	06/14/2023	06/19/2023 12:45	George D Taylor	06/21/2023 23:08	McKinley C Carter	2417294
EPA 200.8 Rev. 5.4	06/14/2023	06/19/2023 12:45	George D Taylor	06/20/2023 18:53	Emily M Philpot	2417293
	06/14/2023	06/19/2023 12:45	George D Taylor	06/20/2023 19:02	Emily M Philpot	2417294
	06/14/2023	06/19/2023 12:45	George D Taylor	06/20/2023 21:07	Emily M Philpot	2417293
	06/14/2023	06/19/2023 12:45	George D Taylor	06/20/2023 21:17	Emily M Philpot	2417294
EPA 8270E	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/20/2023 23:07	Michael Poppell	2417291
	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/20/2023 23:39	Michael Poppell	2417292
	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/20/2023 23:49	Lipi Saha	2417291
	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/21/2023 00:19	Lipi Saha	2417292
EPA 8276	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/22/2023 09:15	Lipi Saha	2417291
	06/14/2023	06/16/2023 08:00	Fe-Val Siddell	06/23/2023 01:56	Lipi Saha	2417292
SM 2340 B-2011	06/14/2023			06/21/2023 22:10	McKinley C Carter	2417293
	06/14/2023			06/21/2023 23:08	McKinley C Carter	2417294