State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

L. P. Voigt
Secretary

BOX 450
MADISON, WISCONSIN 53701

September 16, 1969

Mr. John F. Carr
Bureau of Commercial Fisheries
Box 640
Ann Arbor, Michigan

Dear Mr. Carr:

As of September, 1969, the Wisconsin Department of Natural Resources, Division of Environmental Protection, had collected approximately 850 samples in the Lake Michigan Drainage Basin for pesticide analysis. Three hundred fifty analyses have been completed. The following table summarizes the sampling and analysis completed:

Type of Sample	Samples Collected	One Column Analysis Completed
Invertebrates	160	135
Sediments	150	0
Vegetation	150	0
Industrial	130	125
Clams	100	55
Waters	60	15
Sewage Plant Effluents	45	10
Fish	35	10
Plankton	20	0
Totals	850	350

Preliminary results indicate a concentration of 20 parts per billion (ppb) or less of a chlorinated hydrocarbon in invertebrate organisms to be of a background nature. From 20 to 100 ppb indicates significant contamination and reason for concern. Concentrations above 100 ppb appear to be highly significant in invertebrates.

The limited clam monitoring data available indicates concentrations comparable to those of the other invertebrates to be of similar significance.

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More data is required to draw conclusions on river water samples however, concentrations of over 50 parts per trillion (ppt) appear significant.

Some of the industrial sampling has shown a problem in differentiating between polychlorobiphenols (PCB's) and chlorinated hydrocarbons making interpretation difficult. In some instances, reportedly high pesticide values in a stream have been traced to industrial effluents which also were reported to be high in pesticide concentrations. Some of these industries use plastics, vinyls, and epoxy paints which are no doubt interfering with the pesticide analysis.

Wisconsin will continue its pesticide monitoring program in much the same way but with more emphasis on locating specific sources of pesticides.

Very truly yours,
Bureau of Standards & Water Surveys

Donald R. Winter By

Donald R. Winter, Water Pollution Biologist
Laboratory Services Section

DRW:bky