WQ-10

MINNESOTA POLLUTION CONTROL AGENCY
Division of Water Quality
June 24, 1975

Status Memorandum on PCB Problem in Minnesota

Introduction

The following is an update memo regarding the polychlorinated biphenyl (PCB) problem in surface waters of the State and specifically the Lake Pepin region of the Mississippi River.

Inter-Agency Task Force

The Inter-Agency Task Force on PCB's was formed on May 23, 1975 with the following agencies having representation: Minnesota Department of Natural Resources, Minnesota Department of Health, Minnesota Department of Agriculture, Minnesota Pollution Control Agency, Wisconsin Department of Natural Resources, U.S. Environmental Protection Agency, and U.S. Food and Drug Administration. In addition to the above agencies listed, the Agency staff has asked that representatives from the Metropolitan Waste Control Commission and U.S. Fish and Wildlife Service also participate on the Task Force.

The Task Force has held two additional meetings since May 23rd (June 2nd and June 18th, 1975). These meetings have resulted in the development of an action program to investigate and identify the extent of the PCB problem in the Mississippi River below the Twin Cities Metropolitan Area and the source(s) which may be contributors.

The Task Force is presently compiling the results of a Quality Assurance Program involving seven (7) laboratories conducting fish flesh analyses on species from Lake Pepin. Also during this same period, the Minnesota and Wisconsin departments of natural resources have been collecting representative fish species from this segment of the Mississippi River as well as the major tributaries.

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The Task Force in their investigations to identify source(s) will be looking at the following suspected general categories: municipal and industrial wastewater effluents, stack-air emissions, storm sewer outlets, landfill and dump leachates, and other unknown and possibly ubiquitous sources.

Surface Water PCB Concentrations

The Agency as part of its routine water quality monitoring program has identified significant concentrations of PCB's (as Aroclor 1254) within the Mississippi River in 1975. Also, both Minnesota and Wisconsin's departments of natural resources have reported levels in fish which have been in excess of the U.S. Food and Drug Administration (U.S.F.D.A.) "Action Limit" of 5 parts per million. The staff has included a memorandum identified as Attachment A for your information in this regard.

The high levels of PCB's in the fish tissue have resulted in the enforcement of the "Action Limit" by the USFDA and subsequently a temporary ceasing of commercial fishing operations within the Lake Pepin area. This economic hardship has been reflected in a loss of jobs and profits to these companies as well as a reduction in tourism.

PCB Problem Elsewhere

It is worthwhile to note that this particular problem has not been limited to the Minnesota-Wisconsin Mississippi River waters. For your information, the staff has included a copy of the Lake Michigan Toxic Substances Committee Report, Conclusions, May 22, 1975, listed as Attachment B. Particular attention is warranted to conclusions C and F which reflect a similar situation occurring in Lake Michigan in respect to Lake Pepin.

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Of equally significant concern are the effects from PCB's which have been occurring in the waterfowl of Lake Ontario. Again for your information, the staff has included a draft copy of a portion of Appendix A, Annual Report of the Water Quality Objectives Subcommittee to the Implementation Committee and Great Lakes Water Quality Board, June-1975, Draft of May 16, 1975 listed as Attachment C. This report will be presented to the International Joint Commission during the week of July 28, 1975. Your attention is directed to pages IV-19 through IV-21 which explains the effects of high PCB's in fish resulting in severe reproductive failures observed in herring gulls (fish eating waterfowl) colonies of Lake Ontario.

Within Lake Superior, the Great Lakes Environmental Contaminant Survey (GLECS) which is conducted yearly by Michigan's Departments of Natural Resources and Agriculture, the U.S. Food and Drug Administration - Detroit Region, and the Great Lakes Fishery Laboratory have determined, as a result of PCB analyses of trout, that a pattern of elevated residues exists much in the same sense as observed in Lake Michigan. The staff has included that report: Contaminants in Upper Great Lakes Fishes, Wayne A. Willford, U.S. Fish and Wildlife Service, March, 1975 for your information (Attachment F).

Recommendation

The effects of recent high levels of PCB's observed in the Mississippi River have resulted in concentrations in the fish tissues greater than the current USFDA "Action Limit" of 5 parts per million. An economic loss has already resulted to the commercial fishery and tourism industries of the Lake Pepin area due to PCB's. As the Agency staff continues to investigate and identify sources contributing to this problem (See Attachment E), it is appropriate to recommend that the Agency Board adopt a resolution which would control the source of these compounds.

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It is recommended that the resolution, if adopted, be presented to Representative Lionell Van Deerlin, Chairman, House Subcommittee on Consumer Protection and Finance, and Senator John V. Tunney, Chairman, Senate Special Subcommittee on Science, Technology, and Commerce, and the Minnesota Congressional delegation. The proposed resolution has been included as Attachment A.

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