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Congress of the United States

House of Representatives

Washington, D.C. 20515

MEMO ON: Polychlorinated Biphenyls (PCBs)
FROM: Rep. Les Aspin

I. INTRODUCTION

Less than a decade ago, Swedish Chemist Soren Jensen found Polychlorinated Biphenyls -- PCBs -- to be present in biological material from many ecosystems. Since then research in the area of environmental contamination by PCBs has grown rapidly, intensifying in the past six months.

With a steady improvement in analytical methods and a rapidly growing interest in the biological activity of PCBs, it has now been established that PCBs are among the most abundant, persistent and widely dispersed environmental contaminants.

II. WHAT ARE PCBs?

Polychlorinated Biphenyls are a group of industrial chemicals with widespread uses. Produced since 1929, they were not recognized as environmental contaminants until 1966. PCBs are utilized as coolants in transformers, other electrical equipment and hydraulic fluids. In the past items such as surface coatings, plasticizers, sealants, adhesives, printing inks and carbonless copy paper have contained PCBs.

In 1971, Monsanto Chemical Company, the sole producer of PCBs in the United States, voluntarily restricted sales of the chemical to use in sealed products such as a coolant in transformers and other electrical equipment. The U.S. imports PCBs from Russia, Great Britain, France, Germany, Spain, Italy and Czechoslovakia.

PCBs are a "cousin" to another environmental pollutant, the pesticide DDT. Both are chlorinated hydrocarbons. They are so similar, that prior to 1965, many DDT analyses could have mistaken PCB compounds for DDT. There are also indications that PCBs may be the more ecologically damaging of the two, because they are far more stable. DDT may persist in the environment for 15 years, while PCBs may persist for 40 or 50 years.

There is growing concern over the toxic effects of PCBs on humans. Dr. James Allen, Pathologist at the University of Wisconsin's Primate Research Center, has found PCBs to be very toxic in low dosages on Rhesus monkeys. Dr. Allen contends, based on his experimental findings, that exposure levels similar to the monkeys, could make a man extremely ill. Longterm effects to the monkeys who were exposed to PCBs caused abortions, sickly off-spring and general metabolic disturbances.

Dr. Barry Commoner, of Washington University, St. Louis, has stated that the toxicity of PCBs was well-documented as early as 1943 due to manifestations in workers handling PCBs and in products with a PCB content.

In 1968, 1000 Japanese suffered the toxic effects of PCBs when they ate contaminated rice. Symptoms included liver disorders, skin discoloration, severe abdominal pain, and some pregnant women aborted. NOT

Many industrial chemicals have been found to have a direct correlation to the occurrence of cancer in humans. It is feared that PCBs are also different. The EPA is now in the process of preparing a special

toxology report on the carcinogenic effects of PCBs.

III. WHAT'S BEING DONE TO SOLVE THE PCB PROBLEM?

In 1972, the U.S. Food and Drug Administration set up PCB maximum tolerance levels for fish and shell fish, paper food packaging materials, animal feed and poultry and dairy products. These FDA rules and regulations were effective in 1973 and were re-affirmed in 1974. Recent research suggests, however, that PCBs may be hazardous at the established tolerance levels or lower. The FDA monitors fish sampling and wastes and has the legal authority to stop shipments of fish in interstate commerce which exceed the tolerance level. Data obtained during the Spring of 1975 forced the FDA to sample extensively all Lake Michigan fish in interstate transport, and actually seized some Lake Michigan fish.

The Environmental Protection Agency has been aiding in monitoring wastes for PCB levels, and in analyzing fish samples for PCB content. The EPA Region V office at Chicago has been participating with various state agencies in analyzing and making recommendations for the control of the PCB problem. The EPA is also planning to propose stringent PCB pollution rules in 1975, which would severely limit discharges into rivers and streams.

Other agencies working actively on the PCB problem include the Wisconsin Department of Natural Resources, the Duluth National Water Quality Laboratory, the Great Lakes Fishery Laboratory, the Illinois Environmental Protection Agency, the Indiana Division of Water Pollution Control, the Michigan Bureau of Water Management, and the New York State Department of Natural Resources. These agencies are all active in PCB sampling and monitoring.

IV. WAYS TO ATTACK THE PROBLEM.

Neither the Federal government nor many of the state agencies have been tough enough on the PCB problem. Despite the FDA regulations, and the limited uses of PCBs, the PCB contamination problem is increasing, not diminishing. Clearly, more drastic action is needed.

I concur with the Minnesota Pollution Control Agency and its regional member affiliates, the Upper Great Lakes Committee of the Great Lakes Fishery Commission, Assistant Secretary of the U.S. Dept. of the Interior, Nathaniel Reed, and the Great Lakes Basin Commission that the use of PCBs should be banned. As a result, I have introduced H.R. 9525 in the House which would ban the imports of PCBs, and the shipment and use of PCBs in the interstate commerce.

Three U.S. companies have developed a PCB substitute for use in closed electrical systems (transformers, etc.). Two nations, Japan and Sweden, have banned the use of PCBs. Japan uses the substitute of one of the above companies in the electrical systems of its national train network. Proponents of the continued use of PCBs in closed electrical systems say that PCBs are necessary to prevent dangerous electrical fires and accidents. To date neither Japan nor Sweden have reported any increase in accidents as a result of the non-use of PCBs.

Pressure from citizens, scientists and enforcement officials in the Lake Michigan region has prompted the EPA to host a national conference on PCBs. This meeting will be held in Chicago on November 19.

The PCB contamination problem is a plague to our environment, the health of our people, and the national commercial fishing industry. It is my hope that the Congress, the federal bureaucracy and the governments of our states will act promptly and responsibly in abating this problem.

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