STATEMENT OF
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BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT
COMMITTEE ON MERCHANT MARINE AND FISHERIES
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Good afternoon Mr. Chairman, and members of the subcommittee. I am appearing today to discuss the problems created by the widespread presence of polychlorinated biphenyls, or PCBs, in the environment, and actions which the Environmental Protection Agency is taking to reduce or eliminate those problems.

PCBs are a significant hazard to human health and the environment. Laboratory tests show they cause reproductive failures, gastric disorders, skin lesions, and tumors in mammals. Their destructive effects on fish and wildlife are well documented.

However, the PCB problem is but one dimension of a much larger picture of environmental degradation by toxic chemicals. The picture is a dismaying one, as the numbers of different chemicals, amounts manufactured, the uses, and the accumulation in the environment each increase. Incidents of adverse effects on health or the environment have in recent years brought home to us that our ever-increasing use of toxic chemicals poses an ever larger and more hazardous threat to the environment. Further, the history of governmental response to these incidents reveals that, while our authority to act and ability to develop some form of remedies have both improved, we are still fighting a rear-guard action, all too often in a position only to cure and not prevent. While one problem is being solved others are suddenly exploding, or incubating unknown to those who will have to deal with the unhappy results. In the meantime, those other factors -- increased numbers, amounts, uses, and accumulation of chemicals -- mean the environmental burden grows heavier and heavier.

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Let me recall for you some of the warning signs in recent years.

Hexachlorobenzene is a chemical produced as a by-product during the manufacture of several other chemicals. Relatively small amounts have been used as a seed dressing. EPA's concern was triggered when cattle grazing near a chemical wastes disposal dump in Louisiana were found to have levels of the chemical that exceeded the guidelines for meat.

The inadvertent mixing of polybrominated biphenyls, a fire retardant added to plastics with cattle feed, has resulted in tens of millions of dollars in damages sought by farmers owning contaminated animals.

For many years we were unaware of the carcinogenic potential of the major industrial chemical vinyl chloride, and only now are we beginning to effectively contain the chemical.

Asbestos, which is used widely throughout our economy, is known to be a serious health hazard when inhaled. There remain many questions concerning the relative effect of several forms of asbestos fibers, as well as uncertainty as to the effects of ingestion. Finally, limited steps have been taken to reduce exposure to asbestos.

Gross population declines of several flesh-eating wild bird species in the U.S. have been caused by DDE residues resulting from DDT use. In 1969-1970, for example, 1,852 nesting attempts by brown pelicans on Anacapa Island off the coast of California produced but 9 young.

Reproduction of grebes was halted on Lake St. Clair, near Detroit. This was traced to mercury from chlor-alkali plants in the region.

Dozens of dead blue and snow geese were found in Missouri in April 1974 during the bird's northward migration. These birds contained lethal levels of dieldrin in the brain although this compound was not used locally. It was hypothesized that exposure occurred 600 miles to the south in rice growing areas.

These examples have one thing in common - damage to fish and wildlife or man from chemicals in the environment - but they differ in that EPA has authority to deal with some problems but not others. Thus, DDT and dieldrin are both pesticides and have no other uses; we have therefore acted under the Federal Insecticide, Fungicide, and Rodenticide Act to eliminate most uses. Thus, we have controlled their adverse environmental effects, although the full environmental

benefits may not be realized for some time as the amounts already in the environment only gradually degrade or are removed from active biological cycles. The uses of hexachlorobenzene and mercury include pesticides, but pesticide uses are only a small part of those substances entering the environment. We have no authority to control other uses and must rely on the Federal Water Pollution Control Act and the Clean Air Act to achieve partial control.

In the case of mercury we have succeeded in reducing the flow into the aquatic environment, which we judge to be the critical element. On the other hand, reductions in hexachlorobenzene reaching the environment have been due largely to voluntary actions by industry coupled with State regulation.

Asbestos and PCBs are illustrative of substances where our authority is limited to regulating air and water emissions and ambient levels -- a particularly awkward situation in that persistent chemicals are occurring in different media and having different uses. PCBs offer an excellent example of the need for more comprehensive authority.

We now estimate that over the past 45 years, some 1.4 billion pounds of PCBs have been produced in the United States. Of that amount more than half has already entered the environment through discharges to the air, water and land. Although some of this has been chemically or biologically degraded, the vast majority is contained in landfills, contaminated soils, bottom sediments of rivers, lakes, and coastal waters. Unfortunately, there appears to be relatively little we can do to remove PCBs from the environment, and it may be many years before some of our waters will again be suitable for commercial or recreational fisheries.

At present there are over seven hundred million pounds of PCBs currently in use or inventory in electrical equipment such as transformers and capacitors, hydraulic equipment, paper products, and other commercial and industrial products. Without preventive measures, essentially all of these PCBs could ultimately enter the environment and add to the existing soil, sediment, air and water concentrations that I just described. A large part of this amount can be kept from entering the environment if effective disposal and use practices are followed. The remainder may be virtually uncontrollable and will result in a continuing addition to the environmental burden.

We are producing domestically 35-40 million pounds per year. We are importing about one-half million pounds as a chemical, and an unknown amount in PCB-containing products.

In 1975 we found that although PCB levels in most foods have steadily declined, PCBs remain present in our environment to a far greater degree and at higher levels than we would have thought. PCBs are highly persistent - more so than DDT - and bio-accumulate in the food chain. PCB contamination is pervasive in the environment. We have found high PCB levels -- levels greatly exceeding FDA guidelines of 5 ppm -- in fish taken from the Great Lakes, the upper Mississippi River, off the Southern California coast, streams entering the Gulf of Mexico, in the Hudson River and other waterways in New York State. Specifically, high concentrations of PCBs have been detected in recent months in fish in Lake Michigan (up to 165 ppm), Lake Pepin (up to 40 ppm), and in the Hudson River (up to 350 ppm), although the average levels are significantly lower. The presence of PCBs in these waters threatens to destroy commercial and sport fishing and associated industries, since contaminated fish are rendered unfit for human consumption and some fish become incapable of effective reproduction.

The evidence we have accumulated over the past three years has underscored our original concern over the toxicity of PCBs and over the potential health hazard posed by the presence of high PCB concentrations in water and in fish. It indicates that the most serious potential health problem from PCBs which we are able to identify today would come from eating fish which contain high levels of PCBs. Until environmental levels go down substantially, the human health threat from PCBs can only be controlled through not eating fish that exceed the limits prescribed by FDA.

With hindsight, EPA probably should have moved more aggressively to attack PCB discharges into the aquatic environment during the past several years. However, it is important to recognize that annual point source discharges from manufacturers of PCBs and electrical equipment containing PCBs -- which represent the bulk of the discharges which we can effectively address under existing authorities -- probably total less than 10,000 pounds per year. At the same time we estimate that many millions of pounds of PCBs are probably entering the aquatic environment annually through other routes.

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The PCB problem, and expected similar problems, can be effectively dealt with only through authority we do not yet have. Until the Congress passes toxic substances control legislation, we must rely to a large extent on voluntary actions by industry. Let me explain. In 1971, a Federal inter-agency task force was formed to address the question: what do we know and what should be done about PCBs in the environment? At that time, PCBs had been in wide industrial use in the United States for about 40 years. Approximately 80 million pounds were being domestically produced annually. These PCBs were used in a great variety of commercial and industrial products. The task force concluded in 1972 that PCBs were highly persistent, could be found in all parts of the environment, could "bioaccumulate" to unacceptably high levels in fish, and could have serious adverse effects on human health.

The task force recommended--and the Federal Government adopted--a policy of urging private industry to confine PCB use to closed electrical systems, where there were no adequate and safe substitutes.

The Monsanto Company, the sole American producer of PCBs, had already voluntarily restricted sales of PCBs to uses in closed electrical systems. The American National Standards Institute issued guidelines for industry on the use, disposal and labelling of PCBs. The Environmental Protection Agency announced that it would take steps to limit discharges of industrial effluents of PCBs into rivers and lakes. The Food and Drug Administration established temporary tolerances for PCBs in several types of food and set limits on PCB contamination in food packaging and in food processing plants. In addition, the General Services Administration stopped purchase of PCB-containing paper by the Federal government and the Department of the Interior prohibited future use of PCBs in off-shore oil operations. Other nations also took action. Under an Organization for Economic Cooperation and Development Council Decision in 1973, member countries agreed to severely restrict uses of PCBs to certain closed systems; additionally, the OECD Council Decision recommended that member countries further restrict PCB uses whenever possible.

At that time, we believed that these measures would take care of the PCB problem and enable us to continue to take advantage of the unique properties of PCBs while protecting the public and the environment from exposure to hazardous levels of these chemicals. Since 1971, annual U.S. sales of PCBs have been cut in half.

Today, however, we know much more needs to be done. Despite the voluntary actions described, high levels of PCBs remain in and continue to enter the environment. Last November, EPA sponsored a National Conference on PCBs in Chicago to examine the latest scientific findings on PCB's environmental and health effects, and to identify needed control actions. As a result of new evidence indicating the urgency of the problem, I announced on December 22, 1975, these actions:

1. The immediate establishment of requirements to virtually eliminate PCBs from the process wastes of all manufacturers of PCBs and of capacitors and transformers that utilize PCBs. I instructed each of our Regional Offices to take steps to review and amend, if necessary, all waste water discharge permits for such installations, and this activity is currently under way. By March 1 on-site surveys of 50 facilities will have been conducted and by April 1 the process of revising discharge permits for each of these facilities will have been initiated.

2. The issuance of proposed regulations to control the environmental damage that results from spills of hazardous substances, including PCBs. EPA will move as rapidly as possible to finalize these regulations after a public comment period.

3. A request to all State Governors asking them to examine carefully and to apply their authorities to deal with the PCB problem. We are particularly concerned about solid waste disposal problems and effluent discharges into municipal systems, and believe that the States can be particularly helpful in these areas.

4. A request to the heads of selected Federal agencies asking them to inventory their uses of PCBs and PCB-containing materials and to develop plans to assure adequate management and safe disposal of these materials. Follow-up meetings with the Agencies have been held, and detailed activities are being worked out.

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5. Initiation of a number of other programs to find ways to eliminate the environmental discharges from other sources of PCB's including paper recycling operations, the investment casting industry, uses in hydraulic systems, and the disposal of electrical consumer products which contain PCBs.

In addition, during the past several weeks, I have met with representatives of more than 25 companies and trade associations involved in the manufacture of transformers and capacitors containing PCBs and urged their cooperation in seeking alternative approaches to PCBs. Also, I have met with representatives of a number of electrical utilities, transit authorities, and railways who are principal users of electrical equipment containing PCBs to begin to develop additional ways to prevent PCBs from being discharged into the environment. These consultations will continue in the months ahead until we have these aspects of the problem under control.

These actions are based on our conclusion that, in order to stop the growth of the PCB threat, the nation must phase out production and importation of PCBs and products containing PCBs, and assure to the extent possible that PCBs presently in use do not enter the environment.

But the important question is, how do we get beyond cure to prevention of this kind of problem?

Over the five years since Toxic Substances legislation was first proposed, an estimated 1,000 chemical compounds have been introduced into the commercial market each year. This has happened without systematic advance assessment of their potential impact upon public health or the environment.

All of the Toxic Substance Control bills now before the Congress set forth essential authorities which would greatly strengthen our hand in beginning to control the problem of toxic substances entering the environment. The bills would enable us to keep track of chemical substances being manufactured, processed, or imported. We could require the testing of chemicals which appear to pose a risk to health or the environment and are not covered adequately by other laws. We could take immediate action against particularly hazardous chemicals.

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There are other important authorities common to all the bills as well, but the point is clear: the bills would plug the serious gap in Federal authority revealed by some of the cases I have described today. The Administration has announced its support for H.R. 7664 with amendments and I understand that a formal communication on this bill will be forwarded to the Congress in the near future.

In conclusion, Mr. Chairman, I believe that the PCBs and similar problems can be viewed as warning signs. In the face of the burgeoning role of chemicals in the world, we must be able to take all due action to prevent the sort of environmental contamination which PCBs have caused. We cannot rely on half-measures and spotty, limited authority. We cannot wait until a risk-posing chemical is out in the economy before beginning to address the problems it presents. And we should not use our citizens and the nation's fish and wildlife resources to learn what the problems are.

Mr. Chairman, that concludes my prepared remarks. I will answer any questions you may have.