STATEMENT ON LEGISLATION REGARDING POLYCHLORINATED BIPHENYLS

ON BEHALF OF

ELECTRICAL UTILITIES COMPANY, LA SALLE, ILLINOIS

AND

ELECTRONIC INDUSTRIES ASSOCIATION, WASHINGTON, D.C.

TO

HOUSE COMMITTEE ON ENVIRONMENT, ENERGY, AND NATURAL RESOURCES

OF THE

ILLINOIS GENERAL ASSEMBLY

APRIL 27, 1976

BY

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ELECTRICAL UTILITIES COMPANY

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Ladies and gentlemen I am Richard Hauser, President of the Electrical Utilities Company in La Salle, Illinois. Our company was formed in 1934 in Chicago and moved to La Salle in 1943. Our employment varies from 225 to 325 depending on the economy.

I appreciate the opportunity to discuss my views regarding the proposed legislation on polychlorinated biphenyl (PCB). I understand from Monsanto Chemical Company, the only producer of PCB in the western hemisphere, that our company is the largest user of PCB in the State of Illinois.

I am, of course, representing our company's viewpoint, but I am also representing the viewpoints of a number of other capacitor manufacturers who are all members of the Electronic Industries Association ad hoc committee on PCB's.

Capacitors are electrical components which are the only products of our company. Capacitors are consumer products found in fluorescent lights, air-conditioners, television sets, welders, and many other home appliances. There are a number of reasons for their uses, but the largest is to increase the efficiency of our utilization of electrical energy.

PCB's as used in capacitors are liquids that have unique properties which make them very desirable. They are extremely stable which is an advantage in equipment where heat and electrical arcs occur. This stability seems to be a major disadvantage in the environment, because the stability causes these materials to persist without being quickly bio-degraded. PCB's also are excellent insulators, because they do not conduct electricity. PCB's also have the ability to serve as a dielectric material; that is a material which will store energy which is the major function of a capacitor. The stability of PCB is critical to the safe operation of a capacitor. PCB's do not have a flash point below the boiling point of the fluid. That is, if the vapors are in the presence of a flame or electric arc, flame will not be supported by the fluid. Capacitors are used in electrical circuits where electric arcs can be present during component failure. Capacitors are also used in appliances where electric arcs or fire occur for other reasons. It is therefore very necessary for us to exercise care before we give up the fire resistant capabilities of PCB.

My understanding of the environmental problems with PCB are as follows:

As of this date, we know of no adverse health effect which PCB's has caused in humans except those associated with the "Yusho" incident in Japan. In the 1968 "Yusho" incident, approximately 1000 persons ingested large amounts of PCB contaminated rice oil. PCB leaked from a heat exchanger into the rice oil, an occurrence which certainly supports Monsanto's ban in the use of this material in heat exchangers. Although severe acneform, dermatitis, and loss of weight resulted, no deaths were reported. Dr. Kuratsune, who has observed these patients for a number of years, reported his findings at the National Conference on PCB's held in November, 1975, in Chicago. It is my interpretation of his findings that long term carcinogenic studies are inconclusive.

While effects on man are apparently not serious or not yet completely understood, PCB's can be harmful to certain marine and wildlife species.

The Council on Environmental Quality claims the "PCB threat to wildlife was first discovered in 1966 when residues were detected in fish from the Baltic Sea. Then a disconcerting degree of bioaccumulation was found in many other organisms. In two simple food chains, fish and freshwater mussels contained fractions of one-tenth parts per million of PCB's. But these low levels were magnified to much higher levels in animals that eat fish and mussels. PCB's appeared at 5 to 21 parts per million in seal blubber and up to 240 parts per million in the muscle of the white-tailed eagle.

Some aquatic species suffer toxic effects at very low exposure levels. Water containing PCB's at 0.1 parts per million was fatal to juvenile pink shrimp after a 48-hour exposure.

PCB's have also been correlated with lethal effects in game birds; with reduced reproductive capacity of fish-eating mammals, mink and seals; and with reduced resistance to viral infections in experimental animals."

These dangers are what caused Monsanto in 1971 to ban sales of PCB to anyone except capacitor and transformer manufacturers.

Data, which the Council calls "still too sparse for indicating trends," seems to show a"disconcerting pattern of static or rising PCB levels (in the Great Lakes)." "Several Lake Michigan fish shipments were seized by FDA this year, because PCB residues in chubs, coho salmon, and lake trout exceed the current guideline of 5 parts per million..."

"In 1971 the accidental contamination of poultry feed with PCB's forced the slaughter of thousands of chickens and turkeys. No such incidents have occurred since the FDA strictly limited PCB use in 1973. In 1974, only 7 of nearly 4,000 meat and poultry samples analyzed by the USDA contained detectable quantities of PCB."

The capacitor industry has shown its willingness to solve the PCB problem by voluntairly reducing PCB discharges and controlling disposal procedures.

We subscribe to and follow the American National Standards Institute procedure for controlling disposal of PCB: ANSI specification C-107. The Electronic Industries Association has developed a 24 hour per day Spill Control Plan that we endorse and follow. My company has implemented procedures and purchased equipment which has reduced the PCB in our water effluent to .03 pounds per day in 1975.

Unfortunately, the voluntary restrictions have not been accepted by the public, the press, or the U.S. EPA. Pressure mounted until Monsanto announced on January 14, 1976, that they felt compelled to phase-out the manufacture of PCB. Although many manufacturers feel that PCB should be used in "closed system" applications such as capacitors and transformers, the Monsanto decision to phase-out of PCB takes this out of our hands.

In our opinion, the biggest issue the PCB phase-out raises is flammability. All known substitutes pose a fire hazard to capacitor users. The substitutes identified by Monsanto, Dow Chemical, Dow Corning, and Exxon are all fluids which are considered combustible. They posses flash points which allow these materials to support fire. The Electrical Utilities Company has tested a number of the alternatives in an attempt to find an environmentally suitable fluid for capacitor manufacture. The material that we and many of our competitors find acceptable for capacitors is a fluid which has a flash point which will support fire and can be dangerous. In August of 1975, we had a fire in our factory with this material which, fortunately, was not serious. This did emphasize the potential problems of manufacture or use of PCB substitutes. Some of the substitutes may pose as severe environmental problems as does PCB.

The U.S. Consumer Product Safety Commission, Underwriter's Laboratories, and the U.S. Department of Commerce have all expressed much concern about the fire hazard we may be creating in home appliances.

We don't believe they can marshall their concern soon enough or with sufficient strength to prevail on the U.S. EPA to allow regulated use of PCB in certain applications. We also don't believe Monsanto would look favorably on a reversal of their position to phase-out PCB.

The Electrical Utilities Company is therefore proceeding to develop one or more substitutes even though they are combustible. We believe it will require 24 to 30 months to do this properly. This time is needed for life testing to be sure our customers receive a reliable product. Time is also needed for testing of the potential fire hazard which will begin next month when the industry meets at Underwriter's Laboratories in Chicago to witness the first tests on capacitors filled with a combustible fluid.

This review brings us up to the present. I would like now to give you my views on the two proposals before your committee; the Getty Bill, H.B. 3566, and the Pierce Proposal.

Our industry is willing to accept the general principle of regulation as outlined in both of these proposals. I would therefore like to address only those portions of each that I believe should be changed or improved.

In my opinion, the Getty Bill is preferable, because it contains an exemption for capacitors. The Pierce proposal contains an exemption only for "incidental concentrations" which would prevent the Electrical Utilities Company from manufacturing capacitors. In either case, the Monsanto decision to phase out PCB's or the PCB Amendment the U.S. Senate recently approved along with the Toxic Substances Act, will put a "closed end" on the exemption for PCB in capacitors and transformers. Our company must have time, though, to develop the substitutes. The Getty bill provisions in Section 4d would allow this, and I urge you to adopt them.

I am concerned about the second sentence of Section 4d in the Getty bill. This language would appear to place the Agency in the position of having to approve substitutes. I think it would be very unwise to do this.

I believe the portions of both proposals that deal with permitted sale, filing of notices of intent, attaching of labels, and the filing of annual reports should be changed. "Any person" where sales or use of capacitors is concerned could be a manufacturer, a distributor, a wholesaler, or retailer. This would be very burdensome, and I suggest that if you must do this you impose these requirements only on those of us that manufacturer capacitors and sell in the State of Illinois. The industry is not composed of many and control would not be difficult. I would appreciate as little governmental control and paper work as possible.

I would definitely suggest that you consider requiring the labeling only for those capacitors that use more than 2 pounds of PCB. This would simplify the manufacture of many small capacitors, but control the larger capacitors that have greater quantities of PCB.

Thank you for your kind attention and for the opportunity to give you my views. I would be happy to try to answer questions or get information for your committee that might help you.