

BACKGROUND STATEMENT BY ENVIRONMENTAL PROTECTION AGENCY ADMINISTRATOR,  
RUSSELL E. TRAIN AT A PRESS CONFERENCE ON PCB's, MONDAY, DECEMBER 22, 1975,  
WASHINGTON, D.C.

I am announcing today an EPA action plan to reduce, as rapidly and effectively as we can, the serious threat of polychlorinated biphenyls (or PCB's) to human health and the environment. Since their introduction some 45 years ago, PCB's have been used in a variety of commercial and industrial products such as transformers, capacitors, paints, inks, paper plastics, adhesives, sealants and hydraulic fluids. Because of this wide use and because PCB's do not readily degrade, we find, today, that they are widely dispersed throughout the environment--in landfills, soils, river and lake sediments, in our air and water and in wildlife and human tissue. Of particular concern, we are currently finding PCB levels exceeding the FDA limit of five parts per million in fish taken from the Great Lakes, the upper Mississippi River, off the Southern California coast, the Gulf of Mexico and in the Hudson River and other waterways in New York State. PCB's are known to cause significant adverse effects in fish and aquatic life at these and lesser levels. In addition, they have been found in laboratory tests to cause reproductive failures, gastric disorders, skin lesions and tumors in mammals. Consequently, we believe that PCB's constitute a significant hazard to human health and the environment and must be immediately and effectively controlled with every means at our disposal.

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Because of this hazard and our finding that the environmental burden from PCB's is already too great and is growing, it is plain to me that we must, as a society, accept and work toward a goal of totally eliminating the production, importation and use of PCB's as rapidly as possible. Furthermore, we must make every effort to assure that those PCB's now in use do not enter the environment. At the same time, the public should be under no illusion: as to the difficulty of dealing with this problem. We have absolutely no authority under existing law to stop or restrict uses of PCB's. Until the passage of Toxic Substances Control legislation by the Congress, we must rely heavily on voluntary actions by industry. In any event, it will not be possible to eliminate the use of PCB's overnight. Even if we could eliminate these uses immediately, we would have to face the fact that there are hundreds of millions of pounds of PCB's out there in the environment--in landfills, soils and the bottom sediments of rivers, lakes, and estuaries--which will be there for years, like a delayed-action time bomb, and which we have no way to keep from moving into life systems, including humans. With all that we can do, it may take many years before we are able to see a significant decline in the levels of PCB's in the environment. Nevertheless, we must begin at once. Even though our authorities are inadequate, we must do all that we can. I am, therefore, taking the following steps:

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1. I am directing our regional offices, in active cooperation with the states, to immediately establish requirements to virtually eliminate PCB's from the process wastes of all manufacturers of PCB's and of capacitors and transformers that utilize PCB's.
  2. I am calling on the leadership of the manufacturers of PCB's and the major manufacturers of transformers and capacitors to develop safe and environmentally acceptable alternatives for PCB's as rapidly as possible. I am scheduling a meeting in January with representatives of these manufacturers to discuss and lay out specific plans to achieve this end.
  3. I am calling on the presidents of major electric utility companies and other major users of large capacitors and transformers, such as railroads, to assume responsibility for controlling the use and disposal of their PCB's. To this end, I am writing representatives of the companies and their principal industrial associations to meet with me in January to discuss how this might be accomplished as rapidly and effectively as possible.
  4. I am proposing regulations to control the environmental damage that results from spills of hazardous substances, including PCB's. EPA will move as rapidly as possible to finalize these regulations after a public comment period.
  5. I am writing State Governors to ask them to carefully examine and apply their authorities to deal with the PCB problem.
  6. I am writing the heads of selected Federal agencies to ask them to immediately inventory their uses of PCB's and PCB-containing materials and to develop plans to assure adequate management and safe disposal of these materials.
  7. In addition to these steps, I am initiating a number of other programs to find ways of eliminating the environment discharges from other sources of PCB's including paper recycling operations, the investment casting industry, and the disposal of electrical consumer products which contain PCB's.

Before I describe these and other actions in more detail, let me describe the history of past efforts to deal with PCB's and the nature of the problem.

EARLY EFFORTS

In 1972, a federal interagency 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 various commercial and industrial products including electrical equipment, printing inks, carbonless copy paper, paints, sealants, adhesives, plastics, and heat transfer and hydraulic machinery fluids. The task force concluded 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 also recognized, that PCBs had significant advantages over other materials for uses in closed electrical systems. They conduct heat but not electricity, and in 1972 it appeared that the only available substitutes for PCBs in capacitors and in transformers--which are widely used in indoor electrical systems--were too flammable. To have prohibited PCBs for these uses would, in effect, have substituted a safety hazard for a health hazard. The task force recommended--and the Federal Government adopted--a policy of confining PCB use to closed electrical systems.

The Monsanto Company, the sole American producer of PCBs voluntarily restricted sales of PCBs, prior to the task force report, 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 banned PCBs in paper purchased by the Federal government and the Department of the Interior prohibited future use of PCBs in off-shore oil operations.

In February, 1973, in the first international agreement aimed at limiting the production and use of chemicals in order to protect the environment, the Organization for Economic Cooperation and Development announced a decision to recommend to member countries that the use of PCBs be prohibited for industrial or commercial purposes except in certain closed systems. One member country, Japan, subsequently banned the future production or import of PCBs for all uses, after PCB contamination of rice oil adversely affected 1000 people.

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 insulating the public and the environment against exposure to hazardous levels of these chemicals. Since 1971, annual U.S. sales of PCBs has been cut in half - from approximately 80 million pounds to about 40 million pounds.

In retrospect, it is apparent that we could and should have done more. In 1975 we find 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 - far more so than DDT - and bio-accumulate in the food chain. PCB contamination threatens to become 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, ~~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 often rendered incapable of effective reproduction and become unfit for human consumption.

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 PCBs exceeding the FDA tolerance. 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. PCB compounds have also been shown to cause reproductive failure, gastric disorders, skin lesions, and tumors in mammals.

As a result of this new evidence, I called a National Conference on PCBs in Chicago last month, to examine the latest scientific findings on environmental and health effects of PCBs and to identify actions that might be taken to control the problem. Let me summarize what we have learned.

## PRESENT ENVIRONMENTAL BURDEN

We estimate that over the past 45 years, some 700 million pounds of PCBs have been produced and used 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 and in air and water concentrations where they are available for uptake into fish, and shellfish. Unfortunately, there appears to be relatively little we can do to remove PCBs from the environment. We find ourselves in a situation similar to the one we faced with DDT. The environmental contaminant is, practically speaking, beyond our reach through known cleanup techniques and may take many years to degrade to any substantial degree. This means, that it may be 10 to 20 years before some of our waters will be suitable commercial fisheries.

## POTENTIAL ADDITIONAL ENVIRONMENTAL BURDEN

At present there are several hundred million pounds of PCBs currently in use or inventory in closed electrical equipment, hydraulic equipment, paper products, and other commercial and industrial products. Without preventive measures, essentially all of these PCBs will 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.

## FUTURE PRODUCTION

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In addition to the amounts already in the environment and in use, we are domestically producing 35-40 million pounds per year and are importing at least 1 million pounds, and perhaps a great deal more if account is made of PCR - containing products entering the country. Only a relatively small amount, perhaps as much as 10,000 pounds annually is discharged directly into the environment (in wastewater, air or solid waste discharges) in the course of production and manufacturing processes. The remainder is going to uses where it could ultimately be discharged into the environment. We can probably fully control the direct discharges but can only partially control the ultimate discharges from that amount going into use.

## CORRECTIVE MEASURES

These facts lead me to two conclusions: First, we must as a nation commit ourselves now to phasing out the production and importation of PCBs if we are ever to arrest the growing concentrations of PCBs in our environment. Second, we must assure that those PCBs in use do not enter the environment to the extent this can be done.

With respect to phasing out PCBs in the United States, I have invited the heads of companies which manufacture electrical equipment containing PCBs to meet with me in January 1976. I will ask them to accelerate their research, testing, and development of alternatives for PCBs. At the meeting I will be looking for a plan from this industry on how they will proceed and on what schedule. I will also offer EPA's assistance in the assessment of industry's test data to establish the environmental acceptability of proposed alternatives. In this regard I am directing our Office of Toxic Substances to proceed at maximum speed to furnish industry information on the tests that we believe should be conducted to assess those substitutes now on the horizon and those yet to be developed. I should point out that this will be a difficult and time consuming effort, the results of which cannot be expected to be achieved overnight. In my view, however, it is the only approach to an eventual permanent solution to the PCB problem. I should note that a phase-out of PCBs will wholly depend on the voluntary cooperation of industry in the absence of any statutory authority for EPA to require a restriction of production, importation of use of PCBs.

Over the five years since Toxic Substances legislation was first proposed, an estimated 100 chemical compounds are introduced into the commercial market each year. We do so without any systematic advance assessment of their potential impact upon public health. Yet, as we have learned through our experience with such materials as vinyl chloride, we may not discover how harmful a compound can be until years after it has become a rather commonplace item in our everyday life, even a significant factor in our economy. And we, again and again, find ourselves engaged in an extremely difficult and drawn-out struggle to protect the public from a hazard to which it has already been exposed while at the same time trying to avoid putting people out of business or out of work. We find ourselves

trying to choose between a health hazard and a safety hazard. We find ourselves without the authority we need to really cope with the problems like those posed by PCBs -- the authority to limit selected uses and distribution of toxic chemicals as well as to require testing concerning the health and ecological effects of proposed substitutes. Enactment of a Toxic Substances Control Act would substantially strengthen my ability to achieve a phase-out. I will therefore continue to press for passage of such an Act.

We also plan to conduct a thorough review of the Japanese experience in implementing their ban on the production and use of PCBs. We have recently invited representatives of Japanese industry, and they have agreed to meet with us in Washington early next year to discuss this matter. I will also be asking the environmental committee of the OECD at its next meeting to reassess and strengthen their previous recommendations on PCBs. Through this mechanism, I hope to encourage world-wide phase-out of PCBs.

Pending success of a national and, hopefully, world-wide phase-out of PCBs, it is imperative that we take aggressive action to minimize the environmental impact of existing and future uses and disposal of these chemicals. Accordingly, I intend to proceed with the following specific actions.

#### SPECIFIC ACTIONS

61 M → 1. In order to reduce total contamination of the environment from 37 plants that manufacture transformers and capacitors using PCBs as well as from the PCB manufacturing plant of Monsanto in Saukett, Illinois, I have directed our regional offices to complete ongoing surveys of these plants within the next 60 days to determine the precise manner in which PCBs enter the land, air and water from each plant and what precise measures can be taken at each plant to eliminate or drastically minimize such PCB contamination. I have further directed our regional offices to assure immediately thereafter that all water discharge permits issued to these facilities are revised to require that all those measures affecting water discharges are undertaken expeditiously, and to further assure that such measures are also undertaken by facilities which discharge into municipal treatment works and are not therefore required to procure such permits. The results of those surveys will also be used to determine whether an air emission standard for PCBs should be developed and, if so, what it should be. Finally, the surveys will also enable our regional offices, in cooperation with State and local solid waste disposal authorities, to assure that land disposal of wastes from these plants will not cause additional land contamination from PCBs.

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I believe these negligible levels can be attained at reasonable cost in most instances through process changes, substitution and/or installation of control technology. I would hope that these actions can proceed expeditiously and that industry will cooperate. If not, I am prepared to exercise my authority under Section 504 of the Federal Water Pollution Control Act to ensure immediate action in individual cases.

2. In order to ensure the safe handling and disposal of PCBs now in-service, I have called on the presidents of major electric utility companies and other major users of large capacitors and transformers to assume responsibility for controlling the use and disposal of their PCB's. To this end, I have written representatives of the companies and their principal industrial associations to meet with me in January to discuss how this might be accomplished as rapidly and effectively as possible. We will offer to assist them in these efforts and if appropriate, I intend to follow the voluntary industry effort with any needed regulations where I have the authority. We would expect these actions to substantially reduce the potential risk from the large quantities of PCBs which are presently in use, and to thereby avoid their eventual addition to the existing environmental burden. At the same time, I will ask the American National Standards Institute at its forthcoming meeting in January to assist in this effort to develop and implement necessary guidelines and a code of good practice for the maintenance handling, servicing, and disposing of existing equipment containing PCBs.

3. I have signed proposed regulations under Section 311 of the FWPCA to control spills of three hundred identified hazardous substances, including PCBs. These regulations will establish reporting requirements, civil penalties, and hazardous quantities, and ultimately will enable the Agency to require industry to prepare spill prevention control plans. I will press for rapid finalization of these regulations after appropriate public review and comment.

4. I am writing the State Governors to ask them to carefully examine and apply their authorities to deal with the PCB problem.

5. I am writing the heads of selected federal agencies to ask them to immediately inventory their uses of PCBs and PCB-containing materials, and to develop plans to assure adequate management and safe disposal of these materials.

6. I intend to investigate the PCB discharges from major waste paper recycling plants to develop appropriate effluent guidelines and establish appropriate effluent limitations in NPDES permits.

7. I intend to investigate the investment casting industry to develop appropriate standards and guidelines for its air, water and solid waste discharges.

8. I intend to examine the amounts and types of PCBs in municipal and industrial solid wastes and to develop guidance for the proper disposal of these wastes.

9. I intend to work with the U.S. Army Corps of Engineers under the Section 404 Permits for Dredged or Fill Material program and to give special attention in our Clean Lakes and In-place Toxics Program to deal with the difficult problems of PCB-contaminated sediments in rivers, lakes and coastal waters.

With regard to all of these actions, I would again like to caution that they will not lead to a quick and easy reduction of the current levels of PCB's in our environment and particularly in the commercial and sports fish taken from waters most contaminated. Hopefully, the control of discharges will arrest the rapid growth of the problem. Ultimately, however, only the reduced use of PCB's will yield a significant and permanent solution.