

NOV 20 1975

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Environment Role Focus Of Battle Against Disease

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Chicago, Ill. — Prevention of disease by controlling environmental factors that cause the four major killers in the United States — cancer, stroke, heart disease and accidents — is "the most important ingredient in any national health program."

With that statement Wednesday, Russell Train, administrator of the Environmental Protection Agency (EPA), opened a three day conference here on environmental contamination by polychlorinated biphenyls (PCBs).

Train said that those four classes currently cause 70% of the deaths in the United States, that infectious disease has been controlled largely and that control of environmental factors causing disease — prevention before the fact — could be many times as effective as finding cures.

As a first step, Train cited the need for the toxic substances control bill that has been before Congress for five years. Such control, he said would provide "an effective mechanism to deal broadly with such problems, not only after the fact but also to help prevent the occurrence in the first place."

During those five years, he said, 600 new chemical compounds, many of them insufficiently tested, have been introduced.

He said that 60 to 80% of all

cancers are believed caused by chemical substances in the environment.

In many cases, Train said, the harm a new chemical can cause is not discovered until years after it has been introduced to the market and has become a significant part of the economy.

Again and again, he said, the EPA finds itself "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 posed by PCBs."

About 400 persons are attending the conference, including scientists from Canada, Italy, Japan, France, Belgium and The Netherlands, as well as all 50 states.

PCBs are compounds of carbon, hydrogen, oxygen and chlorine. Almost all of those used in the United States are made by Monsanto Industrial Chemical Co., St. Louis, Mo.

They are used primarily in sealed electrical equipment because they will conduct heat but not electricity and do not burn easily. Until about five years ago, they were also used for many other purposes.

Since then, PCBs have been found nearly everywhere in the world and in 1969 in Japan, they caused serious illness in 1,200 persons, some of whom died.

Several medical and biological researchers and biochemists explained Wednesday how they had pinpointed effects of PCBs and of attempts to learn the chemical changes that take place during PCB poisoning.

Medical studies and autopsies in Japan and laboratory work there and in other countries show:

- At high levels, PCBs or some related chemicals frequently found with them, cause liver cancer. At lower levels, noncancerous liver tumors and degenerative liver ailments are caused.

- There frequently is almost uncontrollable acne, swelling of the lips and eyelids and loss of hair, accompanied by severe itching.

- Reproductive functions are disrupted, with females — both human and animals — more quickly affected than males. Included are loss of potency, failure of conception, miscarriages and interruption of the menstrual cycle.

- Some PCBs are quickly excreted by living beings, but others seemingly cannot be processed out of the body, leading to probable lifetime disability.

- PCBs can be taken to an unborn offspring through the placenta, poisoning the child before birth.