

River Reveals High PCB Dose

By Hal Willard
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AN EXPERIMENTAL water quality study being conducted in the Chester River, a tributary of the Chesapeake Bay, shows that a potent industrial chemical called PCB is present in larger quantities than had been anticipated and that it probably washed in from the bay proper.

Researchers had expected to find some PCB in the Chester, on Maryland's Eastern Shore, but thought it would be washed there from agricultural land by rain. Instead, it appears that it moves into the river more than to the bay.

PCB stands for polychlorinated biphenyl and is a family of inorganic chemicals used for 40 years as electrical insulating fluid, heat transfer fluids, and in ink, paint, lubricants, plastics and carbonless copying paper.

A report on the study said the PCB level in the Chester was considerably lower than in the lower Virginia portions of the bay and that "All organisms examined (mussels, soft-shelled clams, blue crabs and several species of fish) on the far side well below the PCB limits for birds or tissue burdens. However, it has not been established whether or not these low tissue burdens are detrimental in themselves to valuable species such as the soft-shell clam and oyster."

It is only recently that there has been growing concern that PCB may have a bad effect on humans. The chemical has been found in such foods of man as chicken, turkey, eggs and fish. The level at which it definitely constitutes a hazard has not yet been determined precisely.

The Food and Drug Administration has proposed controls designed to keep it away from food—banning its use, for example, on food processing plants—but no attempt has been made to keep it out of the environment completely.

Dr. Albert C. DeVore, Jr., deputy director of EPA's Bureau of Ecology, told the report. American Chemical Society has indicated that PCB is not as toxic as some people assume it to be, it said. But, he said, EPA believes the level is in better control.

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PCB gets into humans by washing its way up the food chain. It becomes available to the food chain by accident. For example, it is an ingredient of some cosmetics used on farm wives. It leaks into the ground and is washed by rain into a river. Eventually, it finds its way into fish and shellfish. The next step is mankind.

The study that turned up the PCB information about the Chester River began last November and was designed to serve as a model for detailed man-made-pollution studies of bodies of water to determine pollution levels. It is sponsored and conducted by the Westinghouse Corporation's Ocean Research Laboratory on the Chesapeake Bay and Maryland's Department of Natural Resources.

The highest abundance of funds for the study was enough for only eight months of research. The principals hoped to direct it for four more months, but the study is next Nov. 1

while at the same time seeking a grant from the Environmental Protection Agency with the support of the Maryland congressional delegation, according to Rep. Gilbert Gade of Md.

Scientists feel it is essential to find out where the PCBs being borne into the Chester are coming from so they can be controlled.

The study also has shown that for that investigation, mammals are at low levels, indicating that "accumulations of these materials in agricultural animals have been within reasonable limits."

However, it was discovered that the standard method for testing oysters to learn the chloride content from interstitial in the water is inaccurate. Chloride is a so-called "hard" ion—like like NaCl.

The study report said the EPA has established limits on "how high the levels can rise before they hinder the shellfish and the human consumption" and therefore "research must be directed" to find a way to measure the chloride accurately.