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Institute seeks data to reduce PCB threat

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The Institute of Paper Chemistry is launching an attack on polychlorinated biphenyls (PCBs) in the paper industry in an attempt to reduce or eliminate the chlorinated hydrocarbons from wastes discharged from mills which recycle paper.

The study, according to Wendall Smith, executive secretary, is "pure research that we're doing here institutionally."

The institute did PCB research in 1971 when the chemicals were found in the paperboard area.

Smith said the effort is "to identify them and determine how they're dispated in the environment."

Tests will be conducted in laboratories in paper mills and on organisms living in Lake Winnebago, Little Lake Butte Des Morts and the Fox River, according to present plans.

H.S. Dugal, director of the institute's division of industrial and environmental systems, said the study will have three main goals. They are to develop:

- Accurate analytical procedures required for different types of samples from the pulp and paper industry.
- Information on the distribution of PCBs in individual effluent streams.
- Procedures or processes which would remove or reduce PCBs from effluent streams and, hopefully, from raw materials.

Recycling mills which process paper, such as carbonless copy paper, prior to 1972 find PCBs in the pulp in effluent. The PCBs also are found in once-recycled paper.

The PCBs, a chlorinated hydrocarbon, concentrate in fatty tissues. They can be dangerous to health when consumed by humans at levels greater than 5 parts per million, according to the U.S. Food and Drug Administration.

Tests in 1971 at the University of Wisconsin-Madison showed that smelt contained 2.7 parts per million and lake trout 15 parts.

The institute will investigate ways to analyze the PCBs, according to Dugal. Eventually, the study may find a way to reduce the PCBs in waste effluent from paper mills.

The first two phases of the project are scheduled for completion in August, with the third part to be done in December, Dugal said.

Some lakes in the area have been scanned "in order to determine what the problem is," Dugal said. The institute is attempting now to streamline sampling and will monitor mills.

"It's a long-range problem and to come to a soluton we have to go through these steps," Dugal said.

The institute study will also monitor Lake Winnebago, Little Lake Butte Des Morts and the Fox River, unless plans are changed, he said. Sediments, water quality, invertebrate life and fish life in the water bodies will be examimed, he added.

No definite results have been established because work commenced only in December and extensive sampling of water bodies must be done during the summer, he said.

The study will monitor work in mills as well as laboratory paper processing.

"The point that concerns us is to stop bringing (PCBs) into the environment," Dugal said.

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