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Ecologists Rip Power Line Fluid; 2 Firms Develop PCB Substitute

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Until a few years ago when polluted fish were blamed for causing stillbirths, miscarriages and skin problems in people, hardly anyone outside the power industry had heard of PCB.



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Yet PCB plays an important role in bringing electricity to your home to power the lights, range, washer, vacuum cleaner and other essential appliances.

Those three letters are an abbreviation of the long chemical name (polychlorinated biphenyls) of the insulating fluid used in transformers and capacitors.

Although PCB has been in use 40 years, it stands a chance of being banned in the United States. In fact, Japan already has taken this action.

One of the most outspoken foes of PCB is Nathaniel P. Reed, assistant secretary of the Interior for Fish and Wildlife and Parks. He stood up the situation this way to the National Conference on Polychlorinated Biphenyls:

"The problem is a national problem. I am deeply shocked by the pervasiveness of PCBs; they are literally everywhere.

"I am very troubled by the exceedingly high levels found in fish in all our drainage systems, and I do not mean just the Hudson and the entire Great Lakes system, but the Merrimac and Connecticut rivers of the Atlantic Coast, the Mississippi and Ohio rivers of the Midwest, the Columbia River system in the Northwest, the Sacramento in the West, the Rio Grande and other Gulf Coast streams. . .even the Yukon in Alaska."

The trouble with PCB is it's not biodegradable, meaning once it has been discharged into a stream it's around forever. This trouble is compounded by the fact that fish absorb



WILLIAM S. KINGSOLVER
Calls PCB ban 'probable.'

PCB, people eat fish and risk physical defects, the environmentalists say.

On these grounds, the Environmental Protection Agency (EPA) will try again in February to put across regulations that would severely limit discharge of PCB into rivers and streams. Although a previous attempt in 1973 fell short, the issue is better understood today and the EPA's chances of success are rated much better.

William S. Kingsolver, vice president, marketing, of McGraw-Edison Co.'s Canonsburg-based Power Systems Division, believes there's "a probable chance the U.S. will ban PCBs." Since McGraw-Edison is one of the four major manufacturers of capacitors, the firm has a big stake in the issue.

This stake is enlarged by the fact that McGraw-Edison and Dow Chemical have developed a substitute for PCB in capacitors. The new insulating fluid, now being commercially tested, will be on the market by mid-1976, Kingsolver told an interviewer.

Most PCB pollution occurs during manufacturing, he said. Although McGraw-Edison's new capacitor plant at Greenwood, S.C., is equipped with a closed system, not all manufacturers are so well protected against spillage, he added.

However, not everyone has thrown in the towel on PCBs, especially the Monsanto Co., this country's only producer. But the company reportedly imposes strict limitations on shipments keyed to environmental safeguards practiced by customers.

Westinghouse Electric, another capacitor maker, said PCB discharges are less than 0.004 per cent at its plants.

General Electric also said it hasn't had any trouble with the EPA over discharges, but conceded, "It is impossible to guarantee no runoff at all."

McGraw-Edison and Dow are moving ahead with their insulating fluid, gambling that the PCB ban eventually will be ordered. The Dow fluid is limited to use in capacitors, he said. "But that's 25 per cent of the PCB market," he added.

Kingsolver said the PCB substitute is so new it doesn't have a commercial name. In the final commercial testing stage, it satisfies environmentalists' objections to PCB and meets industry's technical requirements, he added.

Capacitors are used in power transmission to stabilize the flow of current and maximize performance of a system. PCB is an ideal insulating fluid because it conducts heat without conducting electricity.

Kingsolver contends the Dow substitute does the job as well, although it's flammable and PCB isn't. However, the flashpoint is very low. While PCB once was used in carbonless paper, paints and coatings, Monsanto no longer supplies the chemical for nonessential applications. The firm also assists customers in disposing of used PCB products in a special incinerator to avoid contamination.

Kingsolver estimated the Dow fluid would add about 10 per cent to the cost of a capacitor, but he expects this to drop with high-volume production. "Anyway the higher cost is worth it, considering the environmental aspects," he added.

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