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# Industrial Chemical Poses Threat

Just three years ago about 300 Japanese came down with a strange skin disease. Several of the afflicted died.

The disease and the deaths were caused by an industrial chemical called PCB which had invaded the systems of these people through a contaminated rice oil.

A researcher at the Scripps Institution of Oceanography says the same thing could happen here, even worse.

Dr. Edward Goldberg, a marine chemist at Scripps, said in an interview that the potential PCB danger "is frightening."

He says that in-depth detective work has to be done by scientists "to find all the possible sources of the chemical so that environmental contamination can be controlled."

He said PCB is now a major contaminator of the earth's environment.

Goldberg said PCB (polychlorinated biphenyl) is used in industrial heat-transfer systems. It is highly valued for its ability to withstand temperatures as high as 1,000 degrees fahrenheit. Because of its plasticity, it has been used as an additive for sealants, paints, printing ink and also for pesticides.

Goldberg said preliminary studies indicate ocean fish and plankton (sea life which is eaten by fish) now contain a higher percentage of PCB. He said PCB molecules live longer than DDT, whose effect on fish and birds is relatively well known.

It isn't known how much PCB has escaped into the seas through the atmosphere, rivers, sewers and dumping because its production is a trade secret.

Goldberg said the Monsanto Chemical Co. is the only PCB manufacturer in the United States.

"It's made in other countries, too," he said. "I would guess that Russia makes quite a bit."

Goldberg estimated that Monsanto could be making 30,000 tons a year. But he quickly added that this is only an educated guess.

"A federal law should be enacted requiring Monsanto to

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make its production and use data available to scientists," he said. "Scientists need the data to figure out the amount of PCB present in the environment so they can work to control it."

A panel of the National Academy of Sciences which Goldberg headed has urged an all-out survey of the extent to which PCB has polluted the seas.

The panel made it clear that it believes PCB to present a major potential danger.

"The more the problems are studied," he said, "the more unexpected effects are identified. In view of the findings of the past decade, our predictions of the potential hazards of chlorinated hydrocarbons in the marine environment may be vastly underestimated."

The panel urged that steps be taken to stop the release of PCB into the environment as soon as possible.

Impact of PCB already was felt on the East Coast this summer.

PCB contaminated 16,000 tons of fish meal that were recently incorporated into poultry feed at a Delaware feed plant.

The PCB contaminated the feed after escaping from coolant machinery at the feed factory.

Contaminated feed from the plant was sold to poultry growers in 12 states in the east.

About 80,000 chickens at one farm in North Carolina were destroyed after they were found to be contaminated by the chemical.

The Monsanto firm has announced that it's aware of the pollution problem.

It says it has allocated $2 million to its environmental-control division to tackle the PCB pollution problem.

The firm said it was confining PCB use to closed electrical systems.

But the federal government, like Goldberg, is worried about the PCB impact on the environment. A federal task force is studying the problem.

PCB pollution also is expected to be tackled by the United Nations Conference on the Human Environment next June.

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# Mysterious PCB—Helpful but Deadly to Mankind?

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By ROBERT H. LONGSTAFF
Citizen Patriot Washington Bureau

WASHINGTON — Out there in the environment lurks a chemical element that eventually could wipe out an entire civilization.

The danger to the United States now has become so great that six federal agencies have combined into a task force to find out what it is and what to do about it.

The suspected culprit is a chemical compound called poly-chlorinated biphenyl, or PCB for short.

It costs about 25 cents a pound. It is a synthetic polymer that makes thousands of products more effective, including paint, adhesives, printing inks, insecticides, sealants and many rubber products.

Somehow it is leaking into the environment in amounts more than had been suspected.

The federal agencies charged with the health and welfare of the American public don't know exactly how and why PCB gets into the things Americans consume.

For that is where the real danger is.

PCB is easily transferred into the human food chain. The chemical compound is highly resistant to heat and fire and it is insoluble in water.

On laboratory animals, PCB has been shown to cause cancer and birth defects when it has been injected into their food. The compound is highly soluble in animal fat.

It is a possible long-term buildup in human fat tissues that now worries the nation's top scientists. No danger level in human tissues has been set so far by the Food and Drug Administration, although the agency has arbitrarily set a critical level of PCB in poultry and fish at five parts per million.

That level, however, is highly conjectural because no scientist has applied it at this point to the entire human food chain.

After having been rocked by the DDT pesticide scare, Michigan's new sports fishery mainstay — the Coho salmon — is now believed to be contaminated with high levels of PCB. As a result, Gov. William G. Milliken has suspended the annual "giveaway" of Michigan Cohos to fishermen after the fish have spawned.

The Michigan fish "infestation" has spotlighted what might be happening elsewhere in the nation.

One problem is that PCB, under the microscope, is similar in molecular structure to DDT. What might have been tabbed among Michigan sports fish in the last few years as DDT could have been PCB.

The use of DDT has been restricted in Michigan and many other states. But little is being done to limit the use of PCB in industry — and won't be until the federal task force report is completed.

It might take as much as a year for the study to reveal the dangers of the chemical to the nation's environment.

The latest scare was a delayed Food and Drug Administration report that at least 15 food products had been contaminated by PCB because it had been used in recycled cardboard packaging material.

The FDA and the Agriculture Department have alternately taken various products off the market because of possible PCB contamination, then released them, because no federal agency knows how widespread the penetration of the chemical compound into the human food chain might be.

It would be easy to practically eliminate PCB from the American landscape because it is produced in the United States, Canada and Great Britain only by the Monsanto Chemical Corp. of Louis, Mo., although it also is manufactured by other firms in Japan and West Germany.

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