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Chemicals:

If You Think DDT's a Problem, Meet PCB



E.A. Harris/Sun Bath Agency

"It's 100% effective—it kills everything."

WASHINGTON—PCB, one of the alphabet soup of man - made chemicals, has been around for more than a generation. A colorless, odorless liquid, thicker and more syrupy than molasses, this polychlorinated biphenyl has traveled the world as a thickener in plastics, pesticides, paints and chemicals for office copying equipment. And its strange ability to withstand temperatures of up to 1,600 degrees Fahrenheit has led to its use as a heat exchange material. (Coils and tubes filled with PCB conduct heat from furnaces to ovens and radiators.) Tons of thousands of tons are used every year.

Through it all, PCB has never exactly qualified as a household word; but suddenly, within recent weeks, there have been indications it may be in the running. Like many, another chemical, such as DDT which it closely resembles, PCB has been found to be harmful to the environment, and possibly a peril to man himself. Except for its heat exchange applications, where a substitute material has been difficult to find, PCB is being phased out of business.

William D. Ruckelhaus, head of the Environmental Protection Agency, noted in an interview last Wednesday that it is the sudden contamination of information about PCB that [illegible] concern because it is used so widely in the environment.

The chemical has been [illegible] to cause malformations and liver damage in fish and birds, perhaps even in higher species such as the rat. It has yet to be proved harmful to humans except in massive concentrations. In 1968 five Japanese died and 1,000 were afflicted by an extremely severe form of acne when large amounts of PCB contaminated a batch of cooking oil.

Only last week 50,000 turkeys on a farm in Minnesota were discovered to be contaminated by the chemical, while thousands of coho salmon in Michigan were found to be tainted. Leakage of PCB into chicken feed led to the deliberate destruction of 80,000 chickens in the South this summer.

There also are indications that the PCB problem has been around much longer than anyone realized. It is only recently that chemical analysis methods have been able to distinguish very small amounts of PCB from DDT. It is now believed that much of what was thought to be DDT contamination is really PCB. Like DDT, PCB is an extremely persistent chemical that fiercely resists decomposition.

Earlier this year, Britain banned PCB after alarming concentrations of the chemical were found in birds that feed on fresh - water fish. British scientists subsequently found high levels of PCB in the feathers of birds that died as long as 30 years ago, demonstrating that the chemical has been a long-term hidden pollutant.

PCB becomes a waste product as paints and plastics weather and as machinery is thrown away. Its route then is into sewage, on into streams and rivers and eventually into large bodies of water such as lakes and oceans. Here, particularly in polluted waterways, it is picked up by the microorganisms at the bottom of the food chain, concentrated as it enters ever larger forms of life, and ends up in fish and birds, and probably in humans in very small amounts.

What cumulative effect might the chemical have on humans? At this point, no one knows, but earlier this month the Federal Government appointed a seven-agency task force to find out. What they might discover is anyone's guess, but the investigation probably will resolve the mystery of the chemical's harmful effects as well as call the attention of the public to PCB hazards. As one official of the company that made feed for the turkeys in Minnesota put it: "A month ago we had never heard of PCB."

—RICHARD D. LYONS

* it is given down

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