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New Poisonous Chemical, PCB, A Threat To Mankind

By RICHARD POTHIER
Knight Newspapers Writer

MIAMI — A poisonous new man-made chemical — nearly as deadly and long lasting as DDT — is slowly diffusing through the entire environment — creating fear of another "DDT crisis."

The new pollutant has started to turn up in fish, birds, water, and even man. It's quickly becoming as prevalent in some birds and animals as DDT itself.

Scientists believe the new chemical is a "classic case study" of how a harmful pollutant can spread throughout the ecological system before it's even identified.

THIS NEW environmental threat carries a deceptively simple name. Scientists call it "PCB," short for "polychlorinated biphenyl."

PCB doesn't occur naturally — it's made from benzene, a petroleum derivative.

And PBC is used extensively in manufacturing. It's made by only one company — Monsanto Chemical Co.

Like DDT, PCB is "persistent," which means it doesn't break down quickly in nature. Thus, it remains in the bodies of fish, birds, animal life and even man.

PCB IS used in the manufacture of products ranging from pesticides to ink to plastics to electrical insulation. It's found in plastic bags wrapping supermarket food.

As these products decompose, the PCB remains intact — to be picked up in the "food chain" and work its way up the chain to fish and eagles, and man himself.

Jack Lowe, a fish research biologist at the U. S. Bureau of Commercial Fisheries lab in Gulf Breeze, near Pensacola, said:

"There is evidence now that this compound is toxic to fish and animals.

"We've found it in fish, shrimp, oysters and crabs. It appears that PCBs are toxic to shrimp, for one, but we're still working on it."

OTHER FEDERAL biologists said pesticides such as PCB are being found in dead birds, particularly bald eagles, in about the same amount as DDT — which has up to now been blamed for many bird deaths.

The case of PCB has been something of a scientific detective story. But it's been a detective story in which science was, for a long time, outfoxed by the pollutant.

PCB is so close to DDT, chemically, that by the time chemists identified it PCB had become widely disseminated throughout America and Europe.

LIKE DDT, PCB travels through the food chain in a process called "biological magnification."

Little creatures collect and concentrate the chemical, then are eaten by larger creatures, which in turn are eaten by something else.

Since the larger creatures eat many of the smaller ones, PCB is concentrated along each step until the animal at the top of the food chain — usually, the bald eagle — ingests a large concentration of the pollutant.

Monsanto makes PCB at plants in Alabama and Sauget, Ill. The firm refuses to reveal production figures.

Leakage from the Alabama plant last year produced a major fish kill, according to the Florida Game and Fresh Water Commission.

At federal request, Monsanto is organizing a campaign to reduce PCB and to recover the chemical from manufacturing processes. But the compound appears to be widely scattered already.

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cooperation to bring criminals swiftly to justice.

In the face of discriminatory attacks upon the good name of the State of Mississippi, I recommend our critics improve their own home States before so quickly condemning another.

INTERDEPARTMENTAL TASK FORCE ON PCB'S

HON. WILLIAM F. RYAN

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Tuesday, September 28, 1971

Mr. RYAN. Mr. Speaker, on April 9, 1970, I requested that the Council on Environmental Quality undertake immediately to coordinate the efforts of all appropriate Federal agencies in regard to safeguarding the public from the hazards of a persistent, highly toxic, industrial chemical—polychlorinated biphenyls—PCB's. Therefore, I was most interested to learn that such an interdepartmental task force relating to this problem finally has been established and will be coordinated through the Council on Environmental Quality and the Office of Science and Technology.

Although I believe it to be extremely unfortunate that it took recent occurrences of massive food contamination to stimulate the Government to take this much needed and long overdue endeavor, I am hopeful that the creation of this task force signals a new awareness on the part of the Federal Government as to the threat to health posed by this dangerous chemical. Hopefully, this task force will now take every possible action to insure that our environment and our health are effectively protected from the dangers of PCB contamination.

At this point I include in the RECORD an article by Richard Lyons that appeared in the New York Times on September 23 relating to this situation.

The article follows:

A DDT-LIKE LIQUID STUDIED FOR HAZARDS

(By Richard D Lyons)

WASHINGTON —Officials of seven Federal agencies are expressing increasing concern over the possible health hazards of a colorless, odorless liquid named PCB that some scientists hold to be even more dangerous than DDT, to which it has a close chemical resemblance.

Large amounts of PCB, perhaps tens of thousands of tons, are used annually as insulating fluids and as a means of transferring heat from one mechanism to another, such as in electrical transformers, because it has an extraordinary ability to stand up under heat PCB, which has the consistency of molasses, can withstand temperatures of up to 1,500 degrees Fahrenheit. It is also used in noncarbon copying paper, paints and pesticides

In the last few months large amounts of PCB, or polychlorinated biphenyl, have been found in chickens, eggs, turkeys, salmon and fish meal.

This led the President's Office of Science and Technology and his Council on Environmental Quality to form a study group two weeks ago to investigate the presence of PCB in food and other compounds.

Since mid-August at least three scientific meetings have extensively discussed PCB, including a session of Nobel laureates in Goteborg, Sweden. The scientists concluded that PCB "concentrations may reach levels sufficient to damage ecosystems irreversibly on a worldwide scale before the damage is recognized"

"Their entry into the marine environment should be curtailed to every practical extent, even if this requires constructions on their production and use," the Goteborg statement added.

William D Ruckelshaus, head of the Environmental Protection Agency, noted in an interview today that "it is the sudden accumulation of information about PCB that gives us concern because it is used so widely in the environment"

The agency is part of the PCB study group, which also includes representatives of the Departments of Commerce, Agriculture, Interior, and the Food and Drug Administration

Dr. Charles C Edwards, F.D.A. Commissioner, also said in an interview today that the study group had been convened at his agency's request "because we realized that PCB was a hell of a lot bigger problem than that of the F.D.A alone"

James D. Grant, the deputy F.D.A. Commissioner, said, "We want PCB out of the food supply, but we don't yet regard it as an imminent hazard to health"

The chemical has been in use for 40 years. Like DDT, it resists decomposition and hence persists in the environment for years DDT and PCB are so alike chemically that until several years ago it was almost impossible to detect one from the other by microchemical analysis.

Because of this heretofore undetectable difference, much of the environmental contamination by DDT is believed to have been caused by a combination of DDT and PCB

To date, there has been only one episode linking PCB with health hazards to humans. Three years ago in Japan five persons died and about 1,000 were afflicted with a severe skin disease named chloroacne because a rice cooking oil had been contaminated by PCB.

There have also been indications that some pregnant women who became ill later then had babies with birth defects.

Dr. Robert Risebrough, an authority on PCB who is a professor at the University of California at Berkeley, told a Senate Commerce subcommittee last month that two babies were stillborn and "all showed symptoms" of PCB poisoning.

Yet Dr. Risebrough and other authorities have raised the possibility that PCB in itself may not be harmful to humans, but that the culprit may be a chemical byproduct named chlorinated dibenzofuran This chemical is believed to be capable of causing birth defects to fowl, fish and perhaps rats.

Mr. Grant said that chlorinated dibenzofuran, a chemical akin to the herbicide 2, 4, 5-T, has been found in samples of PCB manufactured outside the United States, but not within. The chemical may be either a decomposition product of PCB, or a contaminant associated with the making of the parent product.

IMPURITY FOUND RECENTLY

The effects of chlorinated dibenzofuran and its link with PCB are not clearly understood. It was only last year that a Dutch scientist, Dr J G Vos, found the impurity

The Monsanto Company of St. Louis, which is the only American manufacturer of PCB, has been conducting a two-year study of the effects of the chemical on rats and dogs. A company spokesman said that no ill effects had yet been detected

He added that the company was taking steps to insure that products containing PCB were not sold to food manufacturing and processing companies. Yet he refused to divulge the amount of the chemical being made.

Other sources have estimated, however, that the annual production is on the order of tens of thousands of tons PCB is also made in Europe, Asia and the Soviet Union.

A report of the DDT advisory committee that was given to Mr. Ruckelshaus two weeks ago noted,

"It appears that the most serious chronic PCB contamination is in fish and fish-eating birds Apparently PCBs are widely distributed among marine birds which are the terminal carnivores of a complex mesh of food chains in the sea .... Most of the acute residues of PCBs found to date can be attributed usually to inadvertent or accidental industrial causes"

In recent months as many as 88,000 chickens, 50,000 turkeys and tens of thousands of eggs have been destroyed because of PCB contamination of feed for fowl.

Over the last two years Representative William F Ryan, Democrat of Manhattan, has been seeking to have the chemical banned. He complained that until recently no Federal agency would heed his call for an investigation of the substance

"I think this is a real disregard for the public health and welfare," he said today.

IN-DEPTH STUDY OF HIGHWAYS IN UNITED STATES IS INITIATED

HON. JONATHAN B. BINGHAM

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Tuesday, September 28, 1971

Mr. BINGHAM. Mr. Speaker, for a number of years, many of us in the Congress have been troubled by the priorities that have been established in America's transportation policy I have introduced a number of proposals to study the problem of transportation in America and to encourage greater emphasis on mass transit systems.

Today, I would like to report that a new initiative in this area is being undertaken by the Council on Economic Priorities. CEP is a private, nonprofit organization which publishes information on corporate conduct in many fields. Currently, CEP is conducting an in-depth study of highways and the highway trust fund, focusing on both the corporate and political forces which shape national highway and transportation policy. I am pleased to add that several student interns from George Washington University, working in my office this fall, will be aiding in researching the project.

The following is an item which appeared in the, June–July 1971 issue of the Economic Priorities Report, describing the project:

COUNCIL NEWS—NEW CEP STUDY

CEP has initiated an in-depth study of highways in the U.S It will explore two basic questions:

(1) Who are the major corporate beneficiaries of the federal highway program? In addition to corporations deriving benefit from highway building—such as construction, asphalt and cement firms—the study will focus on those gaining from highway use, such as petroleum, automobile and trucking firms

(2) What are the relationships between these business interests and the federal government? This portion will focus upon the techniques used by corporate interests to foster additional highway building, the or-

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