PCB Residues

Contamination Hurting Wildlife

Widespread environmental contamination by PCB's, a group of toxic, industrial chemical substances similar to DDT, are jeopardizing federal and state efforts to restore wildlife populations and to protect endangered species, according to an official of the Department of the Interior.

Speaking at a federally sponsored conference on PCB's held last November in Chicago, Assistant Secretary for Fish, Wildlife and Parks Nathaniel P. Reed declared, "The omnipresence of PCB residues in our environment looms as a very dark cloud casting an ominous shadow upon all of our fish and wildlife resource programs which depend on environmental quality and healthy habitats."

PCB's — polychlorinated biphenyls — have a wide variety of uses. The most important is insulation in electrical transformers and capacitors, because of PCB's chemical stability, fire resistance, and electrical insulating properties.

Used throughout the world for over 40 years, PCB's in the 1966's drew international concern as the full extent of their toxicity, persistence, and widespread environmental contamination was discovered. In 1970, the problem was thought to be resolved when Monsanto Corporation, the St. Louis-based firm which is the sole manufacturer of PCB's in the U.S., voluntarily cut back its production of PCB's for use only in "closed cycle" capacitors and transformers.

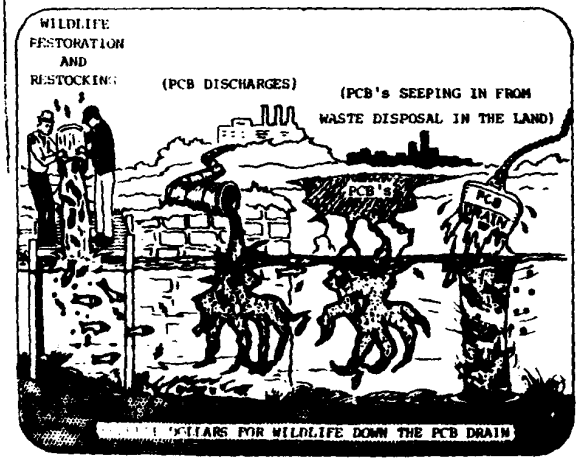
However, several reports indicate that PCB contamination is still widespread, despite Monsanto's actions, and that disposal of PCB-containing equipment and air emissions may be far more important sources of chemical contamination than discharges into waterways. As a result, some environmentalists have called for a ban on PCB use.

The Environmental Protection Agency has no comprehensive authority to regulate toxic substances in the environment, because Congress has been debating such legislation for over five years without successful conclusion. However, EPA has not yet used its water pollution control authorities to regulate discharges of especially toxic pollutants. Thus far, its efforts have been limited to trying to get individual sources of PCB's to reduce their discharges as much as possible before they receive a permit to operate.

While EPA is far behind in using the specific authorities it does have to deal with the PCB problem, Assistant Secretary Reed says, "The PCB problem is a national one that the U.S. Fish and Wildlife Service has identified both in research programs and in the National Pesticide Monitoring Program...PCB residues were found in all of the fish samples from 100 stations located in major river systems throughout the United States, and in almost all the bird samples taken since 1970!"

"I am troubled by the exceedingly high levels of PCB's found in fish from all our drainage systems," stated Reed, "and I do not mean just the Hudson (where very heavy PCB contamination is reported) and the entire Great Lakes system, but the Merrimac and Connecticut rivers of the Atlantic Coast, the Mississippi, Missouri, and Ohio rivers of the midwest, the Columbia river system in the northwest, the Sacramento in the west, Rio Grande river and other Gulf Coast streams, and even in the Yukon in Alaska!".

"Fish are not alone in absorbing sizeable quantities of PCB's," he noted. "The birds we are monitoring are equally susceptible. Waterfowl carry the highest residues in the Atlantic flyway."



level of PCB's allowed in fish for food) established by the Food and Drug Administration. As a result, warnings have been issued about the consumption of large lake trout and salmon from Lake Michigan. Although the contamination by PCB's is particularly evident in salmonids, the problem is also present in commercial species such as carp, chubs, smelt and alewives."

"But if the current level were lowered to 1 or 2 ppm,"

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Herb Blackwell

Outdoors

lantic Flyway, followed in descending order by the Mississippi, Pacific and Central Flyways."

As far as Reed is concerned, it doesn't make sense to pour millions of dollars into restoring wildlife populations if they are going to be contaminated by PCB's. "Consider," he suggests, "the Atlantic salmon egg mortality has been associated with a threshold concentration of about 0.5 parts per million of PCB's. Our scientists state that this threshold concentration in the eggs would be the equivalent to residual PCB levels in the whole fish of 2.5 to 5.0 ppm, comparable to unhealthy levels found in many species throughout the United States."

"The Department cannot justify a salmon restoration program in any northeastern river system where the fish will be subjected to PCB residues!" said Reed.

In another example where both time and money expended were possibly wasted, Reed explains that 17 years and $32 million have been spent to control the parasitic sea lamprey in the Great Lakes which has enabled a successful state and federal restocking program involving more than 150 million lake trout, splake, coho, chinook, and Atlantic salmon, and bokanee, plus additional millions of rainbow, brook and brown trout.

Concludes Reed, "The resulting sport fishing of these salmonid, when combined with the existing sport fisheries on other species, currently contributes approximately $350 million annually to the Great Lakes states and the Province of Ontario."

"All our efforts are for naught," continued Reed, "if these fish cannot be harvested — and we now face this stark possibility!

"A significant portion of these fish contain PCB residues in excess of the current 5.0 ppm action level (the maximum predicted Reed, "then virtually all species would be restricted and essentially the entire Great Lakes fishery would be curtailed." Two private environmental groups, the Environmental Defense Fund, Inc., and the Natural Resources Defense Council, Inc., filed a petition with the FDA requesting that the 5 ppm action level be reduced and eventually phased out. In Canada, the Department of National Health and Welfare already has announced the establishment of temporary guidelines of 2 ppm for PCB's in that country.

NRDC reports that in experiments conducted by the Center for Disease Control, Johns Hopkins University School of Medicine, the National Cancer Institute, and the EPA, laboratory animals fed PCB's in their food in concentrations of 100 ppm demonstrated a marked tendency to develop malignant tumors. Dr. Joseph Highland, director of EDF's toxic chemical program, says that action by FDA is necessary to reduce the risk to consumers from involuntary exposure to a potential human carcinogen.

Sounding the call for drastic action after years of unfruitful Congressional debate and federal delay in exercising existing pollution control authorities to stop the PCB's problem, Reed noted, "The irony of our position today is that our left hand is spending millions of dollars and thousands of man-years to establish a crucial resource while our right hand renders each new growth of this resource malignant. Our new resource will not only self-destruct but can place the human population in mortal danger."

"Quite frankly," Reed stated, "I am thoroughly disgusted by the gnashing of teeth, wailing and rubbing of hands. To the agencies which have the enforcement responsibilities, a word on behalf of the bewildered but concerned American people — GET ON WITH IT!"

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