the environment and you

Environmental Facts

In November of 1975, increasing national concern about a new pollutant—polychlorinated biphenyls—resulted in a major conference in Chicago on how to deal with the problem.

PCBs are industrial chemicals mainly used as insulating fluids in transformers and large capacitors because of their remarkable flame retardant properties. While the concentrations of PCBs are normally quite small—measured in the part per billion—they increase in quantity as they more up through the food chain to man.

EPA estimates that over the past 45 years, some 700 million pounds of PCBs have been produced and used in the United States. Of that amount more than half has already entered the environment through discharges to the air, water and land. PCBs have been shown to have potentially dangerous health effects, and they are so widespread in the environment and non-biodegradable that their presence will continue for years to come.

The Chicago conference concluded that the great commercial and sports fishing resources of the Great Lakes are in great jeopardy because of the presence of high PCB levels.

Sportsmen—ONE Meal of Fish per Week

At present, the Food and Drug Administration has established a temporary human tolerance level to PCBs of 5 parts per million. Because concentrations in many species of fish are higher than 5 parts per million, commercial fishing operations on much of the Great Lakes has been halted and warnings have been issued to sports fishermen not to eat more than one meal of fish per week.

In Japan, humans exposed to high levels of PCBs exhibited chlorance, blindness, systemic gastrointestinal problems, with jaundice, edema and abdominal pain. Studies in animals—birds, rats and monkeys—have shown damage to the liver, spleen and brain. In experiments at the University of Wisconsin, monkeys fed relatively low levels of PBCs produced stillborn and undersized offspring. Tests on rats and mice show that PBCs may cause cancer.

Nathaniel P. Reed, Assistant Secretary of the Interior, says PCBs are damaging the capacity of fish to reproduce and tests show as little as 2.7 ppm have resulted in significant deformities in offspring. "I think the fish are telling us something," says Reed. "They are stating unequivocally that our rivers and streams are sick. We should not need a clarion call to realize that our rivers and lakes—the very lifelines of our environment—are in mortal danger."

Sports Fishing Industry in the Great Lakes Perlied

Reed warns that the fish and wildlife are "the true barometers of the quality of our environment." At the Chicago conference he said that the $350 million sports fishing industry in the Great Lakes is in danger and that the 17 years and $33 million spent by the Federal government to build up the Great Lakes fishery will have been wasted "if these fish cannot be harvested—and we now face this stark possibility."

While DDT levels in Lake Michigan and mercury levels in Lake St. Clair have been significantly reduced in recent years, PCB levels remain high, indicated that the direct and indirect sources of PCB have not yet been curtailed. While the major direct sources of PCBs into the environment have been identified, PCBs also enter the environment from many indirect sources such as recycling of paper products, sealants, paints, inks, old TVs, fluorescent, mercury and sodium vapor lights, air conditioners, lubricants and so on.

EPA

In light of this, EPA Administrator Russell Train has called not only for controls of PCBs already in use but also for a national program of prevention, including new legislation on control of toxic substances that would put new controls on PCB discharges. And, on December 22, 1975 Train announced an action plan against PCB's:

- EPA regional offices were directed to establish water permit requirements that would eliminate PBCs from all industrial process wastes.
- Manufacturers were asked to develop alternatives to PCBs as soon as possible.
- Presidents of electric companies and other large users of PCBs were asked to control use and disposal of PCBs.
- Regulations to control spills of PCBs and other hazardous substances were proposed.
- Governors were asked to look at how they might be able to deal with the problem and Federal agencies were asked to immediately inventory their uses of PCBs and to develop plans for adequate management and safe disposal.

Train also warned that the public "should be under no illusions as to the difficulty of dealing with this problem." The problem can not be eliminated overnight with over four hundred millions pounds of PCBs in the environment—in landfills, soils, and bottom sediments of rivers, lake and estuaries.

Industries Response

Subsequently, on January 27, 1976, Monsanto, the sole American producer of PCBs, announced it will phase out PCBs as soon as acceptable substitutes are found. GE and Westinghouse, major industrial users of PCBs,

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say they will use different products as soon as acceptable substitutes are available. PCB substitutes are under development. Possible alternatives include use of mineral oil, air or gas cooling of transformers, new replacement fluids that do not impact the environment and improved water and air treatment.

Six hundred new chemicals enter the environment each year. Under present laws, EPA cannot get complete information on the toxicity of these new chemicals. EPA has no authority to pre-screen chemicals that may have a bad impact on the environment; it can't prevent problems ahead of time by requiring testing until after damage occurs; Federal agency approaches to control are not coordinated; and chemicals can't be restricted or pulled off the market unless it can be legally determined that they pose an imminent and substantial danger to public health. Preventive action can't be taken.

Governmental Action

Proposed legislation to control PCBs has already been introduced in Minnesota, Wisconsin and Michigan. The Indiana state legislature has already passed legislation outlawing PCB discharges. Other states are expected to begin considering similar legislation soon. And the State of New York has for the first time in history moved to close the Hudson River to commercial fishing because of high PCB levels.

For several years, Congress has been considering toxic substances legislation that would require proof of the safety of new chemicals before they are marketed for common use.

Toxic substances legislation before Congress now pending would require improved reporting for industry, increased testing of potential toxic substances, provisions for restricting production and use, recall of seizure of products when an imminent hazard is present, some type of premarket evaluation of new chemicals, inspections and provisions for civil or criminal penalities for violations of the toxic substances law.

What YOU Can Do

The question now, is what can you—the citizen—do to help out:

- Express your views to your representatives and senators on toxic substances legislation.
- Write your state legislators also.
- Be careful to only eat one meal a week of fish from the Great Lakes.
- Write the presidents of major electrical manufacturing companies urging them to phase out use of PBCs in their products. /

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