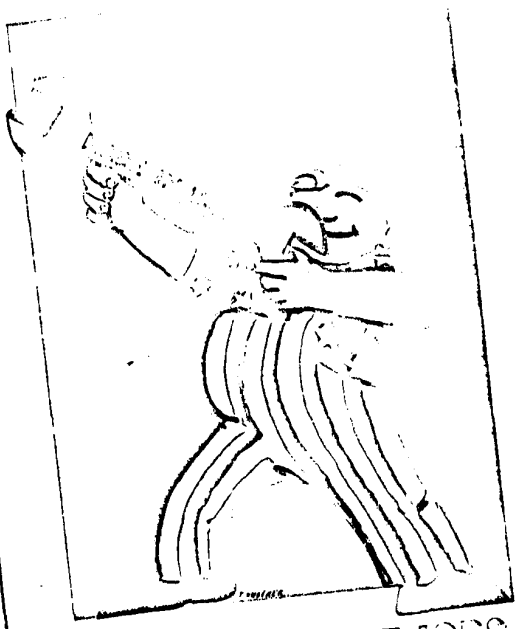
A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

Commerce Today



MCNS 070971

damage amounting to $75 to $100 million. However, on Palm Sunday, April 11, 1965, 37 tornadoes struck the Midwest killing 271 persons and destroying property valued at $300 million. From 1953 through 1969, an average of 642 tornadoes occurred a year in the Nation. But the damage and destruction usually are caused by only one or two percent of the total number. On the average, they sweep a path only a quarter of a mile wide and seldom travel more than 16 miles. Yet some tornadoes have ravaged a path more than a mile wide and 300 miles long.

Obviously, tornadoes would be reduced or prevented if their parent thunderstorms were greatly modified or eliminated. A variety of ideas have been advanced for preventing tornadoes or rendering them relatively harmless. One of these is cloud-seeding. But it appears that several more years of research will be necessary before it can be determined whether cloud-seeding will help or harm.—*NOAA*

White, Wakelin To Address Marine Technology Workshop

Dr Robert M. White, Administrator of Commerce's National Oceanic and Atmospheric Administration, and Dr. James H. Wakelin, Jr., Assistant Secretary of Commerce for Science and Technology, will address a Marine Technology Society conference and workshop scheduled May 15-17.

Sponsored by the Marine Technology Society, the conference is being held at the Arlington, Va., Crystal City Marriott Motel.

Main objective is to provide an insight into possible technological breakthroughs in developing marine resources for man's use, and an understanding of how society will go about evaluating their impact.

Additional information is available from the Marine Technology Society, 1730 M St., N.W., Washington, D.C. 20036. —*NOAA*

PCB Family Of Chemicals Found Presenting A Threat To Man; Law Proposed To Limit Use, Import

Still another family of chemicals, that have been in widespread use for the past 40 years, has been found potentially harmful to man and his environment. A Federal task force reports that there are "many unanswered questions" concerning polychlorinated biphenyls (PCBs), but "so far as is now known, these adverse effects will not occur as a result of the levels of PCBs currently in the environment."

During the past three years evidence has accumulated to indicate that PCBs are widely dispersed throughout the environment and that they can have adverse ecological and toxicological effects.

The principal uses for PCB fluids are in the electrical industry. PCBs have superior cooling, insulating, and dielectric properties and hence are widely used in various electrical devices. PCBs also give electrical equipment the critical advantages of reliability, long life, and compactness. PCB impregnated capacitors, for example, are markedly more reliable and long-lived, and one-sixth the size, one-fifth the weight, and one-quarter the cost of comparable oil impregnated capacitors.

Surveillance increased

A large use of PCBs had been in carbonless duplicating paper. This use has been discontinued. The Food and Drug Administration and the food industry have increased their surveillance to assure that PCBs are not used in food plants, products, or packaging. A significant source of food contamination has been the recycling of paper, including carbonless "carbon" paper, into the production of new paperboard for food packaging.

There currently are no toxicological or ecological data available to indicate that PCBs constitute a threat to human health except for discrete, high-level exposures, but additional experiments are underway to evaluate the impact of low level, long-term exposure to PCBs.

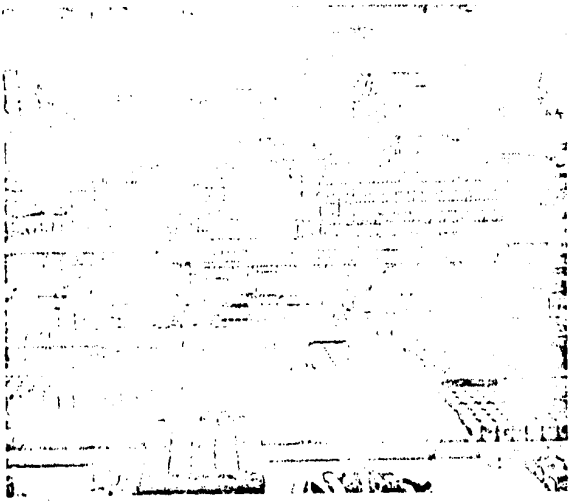
PCBs have been used so widely over such a long period that they are ubiquitous. Even a total cessation of manufacturing and use of PCBs would not result in the rapid disappearance of the material, and ultimate disappearance from the environment will take many years.

Accidental release

The chief task force recommendations and findings included:

- High levels of PCBs have occurred in food as a result of accidental release of the substance, but steps taken by the Food and Drug Administration and the Department of Agriculture are adequate to minimize such accidents.
- All uses of PCBs that are not essential should be discontinued, and to the extent that they must be used great care should be taken to prevent release of the substances to the environment.
- The use of PCBs should not be banned entirely. Their use in electrical devices, particularly transformers and capacitors, is essential to prevent a greatly increased likelihood of fire and explosion and does not significantly contribute to environmental contamination.
- The major gap in the regulatory system to deal with PCBs is the absence of any broad Federal authority to restrict use or distribution, to control imports, and to collect information. Such authority would be provided by the Administration's Toxic Substances

MONS C70972



RECYCLED PAPER SOURCE—*Significant source of PCB food contamination has been paperboard for food packaging produced from recycled paper including carbonless "carbon" paper. However, use of PCB in carbon paper has been discontinued and the Food and Drug Administration and the food industry have increased their surveillance to assure that the chemical is not used in food plants, products or packaging.*

Control Act, now pending before Congress.

• The Monsanto Co., the sole U.S. producer of PCBs, has reportedly taken a number of voluntary actions, including discontinuing sales of PCBs for use in open-system and non-electrical applications for which suitable substitutes are available.

• PCBs are widely manufactured in Japan, Italy, France, West Germany, and Russia, and possibly in Brazil, Argentina, India, United Kingdom, and East Germany. Many electrical products imported from those or other countries into the United States may use PCBs. Presently there is no way to monitor this supply unless the Toxic Substances Control Act or similar legislation is enacted. Until then, buyers of electrical equipment are cautioned that they should question their overseas suppliers about the potential presence of PCBs in equipment and consider the substitution of suitable alternative fluids, if such exist.

• The continued use of PCBs for transformers and capacitors is considered prudent by the task force, because of the significantly increased risk of fire and explosion and the disruption of electrical service which would result from a ban on PCB use. Also, continued use of PCBs in transformers and capacitors presents a minimal risk of environmental contamination.

The task force included representatives of the National Bureau of Standards, and NOAA, and the Department of Agriculture, Environmental Protection Agency, National Institute of Environmental Health Sciences, Food and Drug Administration, and the Bureau of Sport Fisheries and Wildlife.

The 192-page report "PCBs and the Environment" is available at $6 from the National Technical Information Service, Springfield, Va. 22151.

Eight Flash-Flood Warning Systems To Be Installed

A number of automatic warning systems are to be installed at various locations throughout the U.S. to alert business and resident affected when fast-rising flood waters from heavy rains threaten.

The first such system has been installed near Wheeling, West Virginia, by the National Weather Service of Commerce's National Oceanic and Atmospheric Administration.

Such systems will help to deal with a problem made clear by Hurricane Camille in 1969, when, on the night of August 19-20, the remnants of that dying storm released 27 inches of rain in about eight hours on the James River Basin of Virginia, drowning 153 people.

The new flash-flood warning system has three main elements linked together by electrical circuitry: a robot water-level sensor at an upstream point on the river; an intermediate station several miles or more downstream to provide electric power to the sensor; and a community-alarm station from which warnings can be spread quickly to the public.

Enclosed float device

The upstream station has an enclosed float device which operates like a bulb in a toilet tank to activate an electric current when a critical water level is reached. This device may be mounted on an appropriate site such as a bridge support. The sensor is connected to a weatherproof box containing a battery, signal transmitter, and associated circuitry. The signal goes from here to the intermediate station, which is located where both electric power and telephone service are available, and finally to an alarm station in a firehouse, police station, or other emergency

MONS 070973