

FEB 1976

CLIPPED BY
BACON'S

**Background report on PCB's
mentions carcinogenic effects**

Reports of illnesses in humans exposed to polychlorinated biphenyls (PCB's), and the demonstrated carcinogenic effects of PCB's in certain laboratory animal species, have led to re-examination of the distribution and use

34

of PCB's and their potential human health effects. NIOSH has issued a background report of what is presently known on the subject, and requests comments from the occupational health community.

The term polychlorinated biphenyls describes a group of synthetic chlorinated organic compounds, 209 in all. PCB's are supplied to industry as mixtures of some of the 209, each mixture having a specified chlorine content.

Widely used in industry, PCB's have been manufactured in the United States since 1929.

About 12,000 people are exposed on their jobs to PCB's, which are used chiefly in the production of capacitors and transformers. Other current domestic applications include use in investment casting processes, as heat exchange fluids, and as hydraulic fluids. Mixtures of PCB's are important industrial products because they combine good dielectric properties with chemical stability and fire resistance.

In December 1975, the Dow Chemical Company and McGraw Edison jointly announced the development of a substitute (butylated monochlorodiphenyl oxide) for PCB's in high voltage power capacitors. Use of the substitute is expected to begin by mid-1976. Dow-Corning, Exxon Chemical, and RTE Corporation substitutes for PCB's are also being tested or marketed.

Toxic effects of human exposure to PCB's have been known for years. They include an acne-like skin eruption (chlor-acne), abnormal pigmentation of the skin and nails, excessive eye discharge, swelling of eyelids, and enlarged (prominent) hair follicles. Digestive disturbances, burning of the eyes, impotence, and hematuria (presence of red blood cells in the urine) have also been reported.

Chlorinated terphenyls, used in some formulations of wax for investment casting processes, have a chemical structure resembling that of PCB's. They also are reported to have similar toxicological effects. About 330,000 pounds of chlorinated terphenyls were imported by the U.S. during 1974.

The toxic effects of PCB's in animals have been studied extensively. Liver damage, malignancy, and reduced ability to reproduce have been recorded.

The report, "Background Information

on Polychlorinated Biphenyls," may be requested from the Office of Occupational Health Surveillance and Biometrics, NIOSH, 5600 Fishers Lane, Rockville, Maryland 20852.

**Trade Names for Known PCB-
Containing Products**

Trade name	Trade name owner
Aroclor	Monsanto Company St. Louis, MO
Chlorextol	Allis-Chalmers Milwaukee, WI
Clophen	Farbenfabriken Bayer GmbH Germany
Dykanol	Federal Pacific Electric Co. Newark, NJ
Fenclor	Caifaro S.P.A. Italy
Inarteon	Westinghouse Electric Corp. Pittsburgh, PA
Kanechlor	Kanagafuchi Chemical Industry Co., Ltd. Japan
Notlamol	Wagner Electric Corp. Newark, NJ
Phenoclor	Prodelec France
Pyralene	Prodelec France
Pyranol	General Electric Co. Schenectady, NY
Santotherm	Mitsubishi-Monsanto Japan