BRIEF Q&A on PCBs

1. Are PCBs a serious health threat?

A. No. Casual exposure by the general public will not cause any health problems. Recent studies of workers exposed to large amounts of PCBs for periods as long as 20 to 40 years failed to find any causal relationships between cancer, nervous disorders, or other serious health problems. Prolonged contact with PCBs can cause skin irritation, such as dermatitis, and may increase certain liver enzymes. But neither of these is a life-threatening health effect, and both conditions will clear up after exposure has ceased.

2. Don't PCBs cause cancer?

A. The weight of scientific evidence says no. No increased cancer rates have been found among people exposed to PCBs, including workers exposed to high levels over time periods greater than 25 years. In addition, the majority of animal studies on PCBs, including research done in 1978 by the National Cancer Institute, concluded that PCBs were not carcinogenic. One study of mice, done by the Center for Disease Control in 1975, reported that PCBs caused liver tumors, but other respected researchers have disputed this finding.

3. Why the public outcry about the safety of PCBs?

A. This results in large part from the fact that PCBs have been saddled with a reputation for danger that they don't deserve. Some of this reputation springs from PCBs having been singled out for a ban in the 1976 Toxic Substances Control Act. This law was created in an emotional atmosphere of grave public concern about chemical safety. PCBs also were implicated in a notorious poisoning incident in Japan in the late '60s, but researchers now feel that other chemicals were more important factors in this case. Finally, once a chemical is dubbed a cancer agent by the news media -- as PCBs have been time and again -- it becomes extremely difficult to set the record straight on their actual health effects.

4. Are PCBs harmless?

A. Not entirely. I mentioned the dermatitis that can be caused by continued contact with PCBs. In addition, they are persistent compounds, and they can accumulate in the food chain if they are uncontrolled in the environment. PCBs, like any other chemical, should be handled with care and properly disposed of -- in incinerators or landfills for PCBs depending upon their

concentration. But a crash program to rid the country overnight of PCBs makes no sense from either a health-protection or an economic point of view.

5. When did Monsanto begin manufacturing PCBs? Why?

A. PCBs were originated by Swann Chemical Co. (purchased by Monsanto in 1935) in 1929 in response to the electrical industry's need for a transformer insulating fluid that would neither catch fire nor explode. PCBs remained the "Cadillac" of the insulating materials, used in about 15 percent of electrical applications where special safety needs existed. Over the years, other applications were found for PCBs in heat-transfer systems, sealants, adhesives, printing inks and insecticides.

6. When did Monsanto stop making PCBs?

A. In 1971 after scientific investigations had confirmed the presence of PCBs in the U. S. environment, Monsanto terminated sales of PCBs to all non-electrical (open) applications. At the same time, we began publicizing potential environmental problems and the need to prevent entry of PCBs into the environment.

In July 1977, the company voluntarily ceased manufacturing PCBs altogether with all inventory distributed by October 31, 1977.

The reason for the delay in getting out of the business was demand by our customers for a material which would prevent the possibility of fires from transformers or capacitors in apartment buidings and other high-population areas. Mineral oils -- used in most other applications -- have a stability problem that makes them potentially hazardous. In fact, fire, insurance, building and electrical codes in many parts of the country ~~have~~ traditionally insisted upon PCB use.

Monsanto stayed in the PCB business until that time because adequate substitute insulating fluids were not available and ~~it~~ government, consumers and the electric power industry recognized that a flame-retardant fluid was essential to the safey of ~~electrical equipment~~ capacitors, ballasts and transformers in apartment buildings and other high-population areas. Mineral oils--used in most other applications-- have a flammability problem that makes them potentially hazardous.