PCB -- MONSANTO TAKES VOLUNTARY ACTION

For 40 years, Monsanto Company has produced an industrial chemical called polychlorinated biphenyl (PCB). Because of its excellent fire-resistant properties, PCB has been sold as a dielectric fluid and coolant for transformers and capacitors, for heat-transfer systems, and for industrial and hydraulic applications. Today, the major volume use continues to be in electrical (closed) systems. Fire-resistant fluids are vital to the electrical industry worldwide. At present, there is no substitute for this material.

PCB properties are also compatible with a wide range of natural and synthetic polymers and copolymers which have made them useful in many industrial formulations such as specialty paints, adhesives and coating compounds.

In 1966, two Swedish scientists published their research results on the presence of DDT in the environment. In addition to measuring DDT levels, they also identified many other substances, including PCB.

Since Monsanto is the only U.S. producer of PCB, the company studied the findings carefully and concluded additional research was required.

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The company began a program to cooperate with scientists around the world to properly identify and measure the extent of PCB in the environment. Part of the company's program consisted of developing test methods, using liquid gas chromatography and mass spectrometry in combination, to achieve very low level identifications. Many of the laboratories [illegible] in PCB studies are using the ~~Much of the published research on PCB identification has been based on the Monsanto-developed technique.~~ methodology.

In 1969, research findings confirmed that PCB was a persistent chemical and was building up in the environment. In the fall of that year, Monsanto's Corporate Management Committee decided to expand its PCB environmental protection program. An environmental manager was assigned to carry out the following six-point project:

1. Continue the identification and measurement phase begun earlier, and cooperate with scientists worldwide in their research efforts.
2. Discontinue sales of PCB for all open systems ~~general~~ (plasticizer applications) effective August 30, 1970. This has been accomplished.
3. Reformulate industrial and hydraulic fluids. This will be completed by April 1, 1971.

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4. Continue sales of PCB to closed systems such as dielectric fluids for transformers and capacitors. ~~Alert all~~ Customers were alerted to handle the material carefully, collect spills and spent fluids and return it to Monsanto for regeneration or incineration. This is achived and continuing.
5. Continue sale of PCB to closed heat-transfer systems where the fire-resistant feature is essential for safety. Provide design modifications to customers to minimize leakage. Collect spills and spent fluids for regeneration or incineration by Monsanto.
6. Develop alternate products which retain the functional characteristics of PCB, but are safe to the environment. Continue research to make PCB biodegradable in conventional secondary waste treatment plants.

In addition to the major actions outlined above, Monsanto has made significant capital investments in recent months to "tighten up" its manufacturing processes. Loss of PCB in waste streams has been reduced to the parts-per-billion level. Design for tertiary treatment processes, to remove even these minute traces, is under way and equipment will be installed in 1971.

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Animal feeding studies, begun in 1969, are continuing and being expanded. Substitute products, which replace PCB, are being examined for toxicity and biodegradability.

These voluntary actions, begun by Monsanto in 1968, are based on a recognition of scientific evidence that PCB is a persistent chemical which is building up in the environment. The actions also reflect Monsanto's corporate concern for long-term environmental protection.

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