To chem wk 2/24 - WBF ok

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PCB

MONSANTO TAKES VOLUNTARY ACTION

TO SOLVE

~~POSSIBLE~~ ENVIRONMENTAL PROBLEM

Background: 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.

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

Problem: Late in 1966, PCB was identified in the environment. Since it is a chlorinated hydrocarbon, it was thought to be persistent and building up in the environment.

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Solution: As sole U.S. producer of PCB, Monsanto Company recognized the potential problem and voluntarily began a program directed toward heading off further build-up of this material.

An early step in the program consisted of cooperating with scientists around the world in an effort to properly identify and measure the extent of PCB in the environment. The company developed test methods, using liquid gas chromatography and mass spectrometry in combination, to achieve very low level identification. Many of the laboratories now engaged in PCB studies are using the Monsanto methodology.

In 1969, reliable scientific evidence confirmed that PCB is indeed a persistent chemical and is building up in the environment. Based on this evidence, Monsanto voluntarily expanded its environmental protection program. Business decisions made, resulted in considerable economic loss to the company.

An environmental manager was assigned to carry out the companywide project. The identification and measurement phase, begun earlier, was continued and expanded.

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Sales of PCB to all general plasticizer applications were discontinued.

An educational program was initiated to alert all customers, using dielectric fluids in transformers and capacitors, to the potential hazard. The program involves collection of all spills and spent fluids for return to Monsanto.

Design modifications were provided to all customers using PCB in heat-transfer systems. Leakage has been minimized. Spills and spent fluids are being returned to Monsanto for safe disposal.

Monsanto has "tightened up" its manufacturing processes via significant capital investments to minimize losses of PCB. ~~in waste streams has been reduced to the parts per billion level.~~

Commitment: ~~By April, 1971,~~ Industrial and hydraulic fluids were ~~are now being~~ reformulated to eliminate persistent forms of PCB.

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An incinerator, capable of destroying PCB, ~~is under construction~~ was constructed and is in operation. Spills and spent fluids, collected by customers and in Monsanto plants, are being collected for disposal in the incinerator, ~~is completed, to [illegible] 1971~~.

Tertiary treatment processes are being designed to remove even minute traces of PCB in manufacturing waste streams. ~~Equipment will be installed by December, 1971~~.

Two-year animal toxicity studies ~~will be completed in August,~~ are completed in 1971 and data will be presented to appropriate government agencies, ~~by October, 1971~~.

Research continues to develop alternate products which retain the functional characteristics of PCB, but which are safe to the environment. Ways are also being sought to make PCB biodegradable in conventional secondary waste treatment plants.

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