Polychlorinated Biphenyls (PCB)

The EPA and New York State pollution control officials are proposing strict discharge limits on PCB fluids which are used as heat transfer and insulating mediums. Their concern is based on recent findings which link PCB with cancer of the liver and certain skin diseases in monkeys and chimpanzees which were used as test animals. PCB's are 30% heavier than water and sink to the bottom of rivers and lakes where they attach to silt and sediment. They are highly soluble and concentrate in the underbellies and eggs of fish. Monsanto is the only U.S. producer of PCB and one of the few worldwide producers. Monsanto is currently manufacturing about 40 million pounds of PCB per year at its single U.S. plant and 20 million pounds per year at a plant in the United Kingdom. Selling prices average about $0.50 per pound, indicating that total sales derived from PCB are about $30 million per year. Profits are believed to be satisfactory but not exceptional, and we estimate that Monsanto's pre-tax margins on sales are in the 10%-15% range.

PCB's were first detected as a long lasting contaminant in 1966. Monsanto then began phasing out production of PCB which had been as high as 80 million pounds per year (in the United States) and also limiting the sale of the product only to those customers which had totally closed processes. U.S. demand for PCB's has been growing very slowly since the early 1970's and a 1971 breakout based on 40 million pounds of consumption is probably fairly accurate. In that survey, it was suggested that of 40 million pounds of production, almost 28 million pounds were used in electrical insulating fluids systems, mostly in transformers and capacitors; 9 million pounds of PCB's were used as heat transfer fluids, hydraulic fluids, lubricants and plasticizors; about 10 million pounds of PCB's were exported.

The EPA is asking for zero discharge limits by September 30, 1976 and Monsanto's customers, such as the General Electric Company, may find it difficult to meet these standards. Monsanto could walk away from the product without a significant financial loss, but PCB's themselves have very useful properties. The company does not believe that there is presently an acceptable alternative product available in the United States. Dow has recently announced a candidate product but it is flame resistant and not flame retardant as are the PCB's. Monsanto also has a number of similar candidates but is not yet able to say with any degree of certainty that it will be able to fully replace the product from a performance standpoint.