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No Later Than Oct. 31, 1977

Monsanto Announces PCB Withdrawal Date

Journal of Commerce Special

ST. LOUIS — Monsanto Co. Tuesday announced that it will shut down its monochlorinated biphenyl (PCB) manufacturing unit, complete distribution of all inventories and withdraw completely from the market as the principal supplier of PCB dielectric insulating fluids to the electrical power supply industry by no later than Oct. 31, 1977.

The firm withdrawal date was announced by Earle H. Harbison, Jr., general manager of Monsanto's Specialty Chemicals Division. Mr. Harbison said the company would have targeted an even earlier shutdown date had transformer and capacitor manufacturers' conversion timetables permitted. Monsanto's PCB products are produced solely for use as dielectric insulating fluids at the company's William G. Krummrich plant located just south of East St. Louis, Ill.

According to Mr. Harbison, PCBs are a group of synthetic chlorinated organic compounds, commercially produced for the first time in 1930 in response to the electrical industry's need for improved dielectric insulating fluids which would also provide increased fire resistance benefits in transformer and capacitor applications.

Widespread Use

"Fire resistant, PCB-filled transformers are used in certain indoor installations such as high rise buildings, hospitals and schools, and in electrically-powered urban commuter trains. Their function is to either increase or reduce voltage or change the current in the system. PCB-containing capacitors are used to control voltage and reduce power losses in fluorescent and mercury lights, AC motors, air conditioning compressors and television receivers," he said. To illustrate the widespread use of PCBs in electrical apparatus, Mr. Harbison alluded to the World Trade Center in New York City where some 220,000 fluorescent light fixtures each containing a PCB filled capacitor, are currently in service.

In describing the magnitude of the problems associated with reaching a firm exit date, Mr. Harbison explained that the unique fire-resistant and dielectric characteristics of PCBs have for the past 45 years made them not only the standard but, in many cases, the only fluids approved for these dielectric applications. He pointed out that fire, insurance, building and electrical codes and regulations in many parts of the country have traditionally required their use in high-density population applications where violent failure of a device containing a flammable fluid could result in a fire or explosion of catastrophic proportions.

Mr. Harbison emphasized that fire-resistant PCB-filled capacitors not only fail infrequently but also fail safely.

Unfortunately, the very properties that have made PCBs ideal and even mandatory for these essential uses, were also found in the early 1970s more than 40 years after they were first introduced to be the properties causing them to persist and accumulate in the environment. Because of this tendency to resist biodegradation Monsanto announced last January its decision to voluntarily cease production as soon as the electrical industry could find viable alternate fluids and convert its equipment, and commenced to their use," he added.

Previous Actions

Citing previous actions undertaken by the company to restrict the entry of PCBs into the environment, Mr. Harbison said that prior to 1970 PCBs were also used in many nonelectrical products as well. He explained that in dielectric applications they are contained in "closed" or sealed systems but in many of the other applications, this was not the case.

So, when scientific investigations first confirmed their presence in the U. S. environment in the early 1970s and long before the potential impact of these findings was determined Monsanto began to implement its voluntary program of terminating sales of PCBs to all nonelectrical applications and simultaneously warned its customers of the potential environmental problems and the need to prevent the entry of PCBs into the environment. Monsanto's voluntary program was reviewed, supported and endorsed by a federal task force formed in 1972 to study the problem.

"This restricted sales policy reduced Monsanto's annual PCB production by over 50 per cent and further eliminated the likely sources of losses to the environment. Principal applications affected by the company's unilateral withdrawal in the early 1970s were in carbonless copy paper, fire-resistant hydraulic fluids, heat transfer fluids and plasticizers," he said.

Mr. Harbison said that it now appears that the industry has zeroed in on replacement candidates and is currently involved in field testing of non-PCB electrical components prior to effecting a total changeover to these. He said that based on what Monsanto has been told about them, it's likely that they are not going to offer a comparable degree of fire resistance. Historically, PCB dielectrics have filled two functions: combining excellent dielectric performance with inherent fire protection. The prospective replacements appear to provide acceptable dielectric performance but system redesign has been required to circumvent the fire hazard potential which was introduced. Whether these candidates will in the final analysis be "acceptable" is one of the major objectives of the field tests now in progress.

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