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JARD Company Inc.

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29 March 1974

Dr. Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs
Office of the Assistant
Secretary of Commerce
U.S. Department of Commerce
Main Commerce Building
14th Street & Constitution Ave., N.W.
Washington, D.C. 20230

Dear Dr. Galler:

JARD is a small electrical components manufacturer that has been in business since February 1970. The company is totally dependent upon the manufacture of oil-impregnated alternating current capacitors used as efficiency-improving devices in the fluorescent and mercury vapor lighting industries and the air conditioning industry.

The capacitor which contains a polychlorinated biphenyl oil has characteristics of (1) nonflammability (2) small physical size, and (3) high reliability with failure rates much less than 0.2% per year.

Unfortunately, the oil, which imparts the above characteristics to these capacitors, has, after 40 years of use, recently been listed as a toxic pollutant by the environmental protection agency with suggested maximum effluent levels so restrictive as a cause for a ban.

Polychlorinated biphenyls (PCB's), first synthesized in the late 1800's and first commercially used in the mid-1930's, contain a percentage (varying percentage of 0.4% to 60% depending upon the grade) of material which is persistant in nature. This persistance and past uses, in pesticides and carriers for pesticides, paints and coatings, provided widespread distribution into the environment causing the material to be considered ubiquitous.

In 1966, the PCB's were identified to be a potential food contaminant.[1] As more evidence became available regarding its widespread existence in the environment, the sole domestic supplier, Monsanto[2], voluntarily restricted sales to only the essential electrical applications in sealed containers. Approximately 97% of the users, and point sources of PCB effluents, were eliminated as a result of the change in sales policy, and a large percentage of the 40 million pounds eliminated as a result of the change had been used where purposely exposed to

1. Jensen, Soren 1966 - Report of a New Chemical Hazard, New Scientists 32:612
2. Monsanto Industrial Chemicals Co., 800 N. Lindbergh Blvd., St. Louis, Mo.

the environment, eg. in pesticides.

Also, the electrical industries users of PCB's, (the transformers and capacitor manufacturers) established guidelines in the Spring of 1972 for handling and disposing of this material. Committee C-107 of American Standards Institute published and the National Electrical Manufacturers Association adopted these guidelines as a Standard CP-P1-1973/TR-P6-1973.

Most manufacturers have since imposed self-control in adherence to the standard which include proper plant housekeeping, proper disposal of solid and liquid wastes which contain PCB's and methods for minimizing effluent stream contamination.

In addition, Monsanto supplied, to the capacitor industry in September 1971, a PCB compount which reduced the percentage of persistant material from 7% to 0.4%, and by December 1971, all capacitor manufacturers had changed.

The above changes appear to have been successful in reducing contamination for in the previous three years of 1969, 1970 and 1971 several incidents involving PCB contamination were found but, the Food and Drug Administration has said no PCB residues "that could be quantitated" have been in the FDA's last 10 Market Basket Surveys (Food Chemical News, July 9, 1973 - page 11). Others have reported a significant reduction in PCB input to the environment.

However, the EPA under Section 307 of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) published a list on September 7, 1973 that included PCB's as a toxic pollutant.

It is very difficult to understand the reason for listing when reviewing the total picture on PCB's, as mentioned above, with the Administrators Mandate, (See Federal Register, Vol. 30 No. 129 Friday, July 1973) which, for inclusion of a material on the list, was to focus on those water pollutants which pose the most serious hazards and to pose the most immediate problems. Also, in the United States, medical records show during the 40 years of unrestricted use, the only adverse health effects experienced by workers exposed to PCB's have been infrequent cases of non-chronic chloracne or other temporary skin irritations.[3]

On December 27, 1973 and as required by public law 92-500, the EPA published a proposed effluent standard for toxic pollutants. The discharge levels suggested for PCB's (.0648 pounds per day maximum) are so restrictive that the effect would be an outright ban.

For alternating current capacitors, a ban on the use of PCB's would force the re-introduction of a mineral oil capacitor 40 years after having been phased out. The result of this substitution would be to (1) replace a non-flammable product with a flammable product (2) replace a given capacitor with one that is twice the size (3) double the cost of the capacitor function (4) reduce by approximately one half the numbers of available capacitors which are an allocated commodity today because of the material, (paper and aluminum foil) shortages and (5) not contribute significantly to the elimination of present environmental levels of PCB's.

3 NEMA CP-P1-1973

A flammable product used in appliances could certainly create an additional hazard in the home and it is doubtful that its use would be permitted (see attached copy of letter from Mr. R. H. Meyerhans of Fedders Corporation to Dr. Hugh Thompson of the EPA). Further, because the available substitute would require nearly twice the material for the same capacitor, the demands on the material suppliers would double. As is pointed out by the letters from Mr. T. Steinert of Schweitzer Paper Division of Kimberly-Clark Corporation and Mr. J. Douglas of Republic Foil Division of National Steel Corporation, there are basic raw material shortages which will not permit the growth required even if additional processing equipment were made available.

The result of less capacitors would be to substantially increase the demand on electrical energy to provide the same amount of lighting, cooling, etc. One industry source[4] has estimated the loss equivalent to one-half of the nations annual growth requirement (44 million kilowatts) of electric power. The additional financial burden for providing more electric generation facilities to compensate for the loss of the capacitors would eventually fall on the already overburdened consumer.

It is suggested that the merits of PCB's far outweigh its problem as a pollutant in light of the present industry self-controls.

The standards of effluent levels which should therefore be adopted would provide continued effective and realistic control of PCB discharges without shutting down the electrical industry users.

Recalling that the number of plants presently using PCB's is less than 3% of those in the past, and that sales have been eliminated where significant percentages of 40 million pounds of PCB's per year were likely to be exposed to the environment, a limit of 5 pounds per day per plant for the approximate 46 plants would impose a tight control compared to the past practices and ensure that additional pollution is kept to an absolute minimum. Also, diligent and responsible members of industry could restrict their PCB effluents to this level.

We believe that PCB's should not have been initially included in the toxic pollutants list and oppose it remaining on the list. However, removal from the list may be more difficult than altering the suggested standard.

It is with this in mind that we request your support and assistance in obtaining relief from the unrealistic levels suggested by EPA for the polychlorinated biphenyls to the more realistic but meaningful maximum effluent level of 5 pounds per day.

Very truly yours,

JARD COMPANY, INCORPORATED

Richard L. Rollins
Vice-President
Engineering

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4 Ltr from Mr. J. Simon, General Electric Co. to Dr. Martha Sager, EPA, 11/21/73