January 12, 1973

Mr. Mark A. Wolf
The Dow Chemical Company
1803 Building
Biochemical Research Laboratories
Midland, Michigan 48640

Dear Mr. Wolf:

Dr. Levinskas has referred your query concerning the available toxicity data on monochlorobiphenyl and dichlorobiphenyl to me. We have acute toxicity data for 4,4'dichlorobiphenyl. The oral LD_{50} in rats was 7600 mg/kg and the minimum lethal dose by skin application in rabbits was 7900 mg/kg. The material was not irritating to the skin and caused only very slight eye irritation. in rabbits. As you are aware, Aroclor® 1221 is composed primarily (80%) of monochlorobiphenyl and dichlorobiphenyl, the remainder is noncchlorinated or more highly chlorinated isomers. Our acute toxicity data for Aroclor® 1221 is very similar to that given for the dichloro isomer.

We do not have specific biodegradation data for the monochloro or dichloro isomers. We would, however, anticipate good rates of biodegradation for these isomers. Aroclor® 1221 is biodegradable and does not accumulate in tissues of animals chronically fed subacute levels.

We do not have information defining the chloracnegenic potential of the monochloro or dichloro isomers. Past experience indicates that the chlorinated biphenyls are not potent chloracnegens. Experience would further suggest that the more highly chlorinated isomers are most active in this regard.

The threshold limit values for chlorinated biphenyls containing 54% chlorine is 0.5 mg per cubic meter; for chlorinated biphenyl containing 42% chlorine or for non chlorinated biphenyl the TLV is 1.0 mg per cubic meter. It could be anticipated that a safe level of the monochloro or dichloroismers would be 100 mg per

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cubic meter.

If we can be of further assistance, please contact me at any time.

Sincerely,

Paul L. Wright PHD
Mgr., Toxicology
Medical Department

/bks

bcc: W. B. Papageorge

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