From MONSANTO CHEMICAL COMPANY

At St. Louis, Missouri

Date February 25, 1957

To Mr. J. E. Crouch Reference

At Anniston, Alabama Subject TOXICITY OF MONTARS

cc Messrs.:
H. I. Armstrong -Robts-3
Jack Clegorn - Anniston
J. Cresce - WGK
J. W. Graves - WGK
R. L. Hedworth - Anniston
Hosmer/Crouch - Anniston
A. P. Kroeger - Robts-3
Minckler/Morris - WGK
Newcombe- Benignus-R-3
M. S. Scott - WGK
J. W. Senger - Robts.
M. C. Throdahl -Robts-3
R. S. Wobus - Robts.

We have no laboratory toxicological data on the Montars.

I believe, however, we can interpret our Aroclor data in advising about the toxicological hazard that might be expected from contact with these compounds. There are two hazards.

One, I feel quite certain that they could cause chloracne similar to the chlorinated naphthalenes and diphenyls. Secondly, I am sure they can cause liver trouble by inhalation of the fumes liberated at elevated temperatures. As you know, the old chlorinated "high boilers" were more toxic than the plain chlorinated Aroclors, and I feel sure that this mixture of polyphenyls is more toxic than chlorinated diphenyl.

The question is how much exposure can one get? This brings us down to vapor pressure and conditions of exposure in the customer's application. These two questions are ones that I would like information on from any of the numerous people receiving a copy of this memorandum. From the practical standpoint, I feel the maximum allowable concentration allowed for Aroclor 1254 which is 0.5 milligrams per cubic meter of air will stand as an acceptable concentration for fumes from these Montars. I do not believe toxicity testing will give us any better information than this. Any experimentation that would give us a definitive answer would require repeated inhalation studies at various levels and would be quite expensive ($10,000 to $20,000) and, I repeat, probably would not give us any different information.

The Medical Department was remiss in allowing a toxicity statement in Bulletin O-139 to appear without any mention of an inhalation hazard. It is my impression we thought the material was going to be used in an outdoor application similar to roofing tar and asphalt. If it is to be used in wire coating and other places where the conditions of work are such that it will be used at elevated temperatures, we must advise against inhalation of fumes.

R. Emmet Kelly, M.D.

REK:SMB

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