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FILE MEMORANDUM

WSF

May 5, 1976

W. S. F.

SUBJECT:

MCA Technical Panel - VCM

MAY 7 1976

A meeting of the Technical Panel was held on April 28 in Washington, D.C. with the authors of the various on-going research projects to bring the panel uptodate with a more or less formalized report. Reports were made as follows:

1. Teratology - by Dr. B. A. Schwetz
Dow Chemical Company

The study consisted of the administering of VCM by inhalation route to three species at four dose levels from 0 to 2500 ppm. Generally the animals exhibited a dose response with deaths occurring greater in mice than in rats and greater than rabbits.

Ethanol potentiation was also studied and maternal toxicity was noted in all three species. Dr. Schwetz found no degree of teratogenic activity and concludes that we need not be concerned about women of childbearing age working in vinyl or PVC plants under today's conditions.

2. Metabolism - by Dr. P. G. Watanabe
Dow Chemical Company

Three metabolites of vinyl chloride were found and identified. At low dose levels, these metabolites are excreted in the urine. At higher levels, not all is excreted but is otherwise detoxified and at still higher levels the detoxification process may not be sufficient and cancer was result. It was evident from this work that the effects of VCM are both dose and time related. It was also shown that the results of this study fitted very well with the dose/time data of Dr. Maltoni.

3. Animal Study - by Dr. M. L. Keplinger
Industrial Bio-test

The IBT studies involved inhalation of VCM using 200 mice, 200 rats and 200 hamsters, equally divided as to sex. Animals were exposed 7 hrs. per day, 5 days per week. The mice were exposed for a period of 5 months, rats and hamsters, a period of 12 months. Dose correlated mortality occurred in the three species and neoplasms were found in each with no sex difference. The effected sights in mice were lungs, kidney and liver while in rats and hamsters only the liver was eff cted. A paper on

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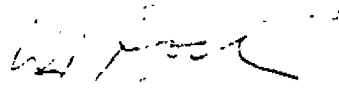
this study will be given at the AIHA Meeting in Atlanta on May 17.

4. Mutagenic Work - by Dr. R. B. Johnston
Dow Chemical Company

After one year of exposure at four concentration levels rats showed no significant increase in mutagenic response. It is also reported that two human studies at low level were negative. Also a dominant lethal study in England showed no effect.

5. Epidemiology - by Dr. W. R. Gaffey
Equitable Health Sciences (formerly Tabershaw Cooper Associates).

Study now covers 10,173 workers exposed to vinyl chloride for at least one year from 1942 to 1972. 707 of this population has died and 669 death certificates have been reviewed. Incidents of cancer of the digestive tract (including angiosarcoma of the liver), respiratory tract and other including brain were found at levels higher than the controlled population. A draft report will be submitted in two or three weeks.


W. C. Koch
Manager
Occupational Health and
Product Safety

WCK:cp

cc: Dr. E. A. Regna
Mr. W. S. Ferguson ✓
Mr. V. D. Piazza