

SM-32 (Rev. 9-57)

REFERENCE

MKS	BWD	CSG	REH	LPH
HSE			MJS	
SUPPORT			CWS	
FEB 3 1978				
MANUFACTURING		SAFETY & HEALTH		
MANAGER	FILE	DISCARD		

SHELL OIL COMPANY

DATE FEBRUARY 2, 1978

FROM CORPORATE MEDICAL DIRECTOR;
CONSULTING TOXICOLOGIST -
HEALTH, SAFETY & ENVIRONMENTSUBJECT VINYL CHLORIDE WORKER
EXPOSURE: VCM

In response to your department's request for information regarding the mutagenic and carcinogenic risks of VCM exposure by workers, Corporate Medical and Toxicology have the following comments.

"Recently, some questions have been asked by plant workers regarding the toxicity of vinyl chloride monomer (VCM). They wanted to know if this compound is carcinogenic, mutagenic or teratogenic to man.

Angiosarcoma of the liver, a rare cancer, has been detected in some workers who had been exposed to levels of VCM considerably in excess of the present OSHA standard and present level of exposure among our own employees. At present, Shell is participating, through the Manufacturing Chemists Association (MCA), in an industry-sponsored study of the mortality of workers exposed to VCM and its polymers. An interim report of the study indicated that the incidence of some cancers appears to be higher in individuals with higher exposures and those with longer exposure periods. The final report is expected in early 1978. At present, we feel there is no evidence demonstrating risk of cancer at levels mandated by OSHA standards.

The question of VCM mutagenicity in man has not been resolved. Laboratory studies with bacteria suggest that VCM may be a mutagen. However, a study using mice showed that VCM at very high concentrations in air (30,000 ppm) was not mutagenic. There are some studies in which worker exposure to VCM has been associated with chromosomal changes in lymphocyte cells. These studies are difficult to evaluate and extrapolate to the workplace.

A recent report on vinyl chloride, which was prepared for the Society of Plastics Industries, Inc. (SPI), concluded that at the present time there is no evidence of an association between vinyl chloride and birth defects or vinyl chloride and abortions in wives of VCM workers.

Obviously, VCM is a chemical which should be treated with respect at all times. Workers (male or female) planning a pregnancy or women who find themselves pregnant should be particularly careful to avoid over-exposure. Although there is no evidence to indicate that currently allowable exposure levels are not safe, anyone planning a pregnancy or women who find themselves pregnant should discuss their work with company health personnel and their physicians."

JANUARY 30, 1978

You should realize, of course, that we are not proposing this statement should stand alone as a communication to employees. Before such a communication is made available to employees, Manufacturing should include their own evaluation of current levels of exposure in the workplace.



R. E. Joyner, M.D.



M. B. Slomka, M.D.

cc - P. F. Deisler, Jr.
M. K. Seggerman ← THIS COPY FOR
A. D. Abshire
H. L. Kusnetz
R. J. Reynolds
HS&ES-IS (2)