

Shell Oil Company



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November 25, 1980

Docket Office
Docket H-090A
Room S6212
Dept. of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Gentlemen:

OSHA CANDIDATE LIST OF POTENTIAL CARCINOGENS: VINYL CHLORIDE (VCM) -

Shell Oil Company appreciates the opportunity to submit comments concerning your inclusion of vinyl chloride on the OSHA list of candidate substances for regulation under the generic carcinogen standard (45 FR 53672-9). Shell is a major producer of vinyl chloride and therefore would be affected by any further reduction in the regulated levels of VCM. We have supported responsible regulation of substances shown to place employees at risk of harmful effects.

Our review of the available data and information leads us to conclude that VCM is not in need of further regulation below 1 ppm and therefore should not appear on OSHA's "Priority Lists" under the generic cancer standard.

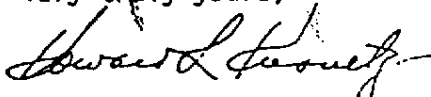
The permanent standard regulating vinyl chloride became effective April 1, 1975. The standard, 29 CFR 1910.1017, limits exposure to 1 ppm of VCM averaged over an 8-hour period, with a 15-minute ceiling exposure of 5 ppm allowed. Vinyl chloride is a recognized human carcinogen, and the development of current regulations is an example of responsible action by the regulatory agency and industry. OSHA's PEL for VCM was originally set at 500 ppm in 1971. Shell started up two world-scale VCM units in 1971 and 1973. The American Conference of Government Industrial Hygienists (ACGIH) had adopted a time-weighted average (TWA) of 200 ppm in 1972. Immediately after start-up, our plants may have occasionally experienced exposures up to 200 ppm, but as information regarding potential health effects of VCM was received, we modified our plants to reduce exposure. In July, 1973, we set an internal standard of 50 ppm. OSHA did not issue its Emergency Temporary Standard (ETS) of 50 ppm until April, 1974. Less than a week after the ETS issued, Shell reduced its internal standard to 10 ppm and began an extensive study to investigate the possibility of reaching 1 ppm or less over an 8-hour period. By the time OSHA's permanent standard of 1 ppm was promulgated in 1975, Shell had already reduced its TWA to 1 ppm.

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Very high exposures to VCM in past years, when its danger to health was not fully recognized, have resulted in some cases of angiosarcoma of the liver. (Liver angiosarcoma is also caused by other materials, such as inorganic arsenic and thorotrast.) The attached graph¹ depicts the annual incidence of death from angiosarcoma of the liver in VCM workers from 1955 to the present, complete through May 1, 1980. It shows that the number of deaths from this cause in North America peaked at 4 in 1975 and 1976 and has since declined. These cases are but a small fraction of angiosarcoma from all causes. Currently observed cases of human angiosarcoma attributable to VCM exposure are probably related to earlier unfortunate massive exposures.

OSHA has responsibly regulated VCM. The available data indicate that employees are not being endangered by exposure to VCM at the regulated level of 1 ppm. We therefore conclude that there is no need or justification for any further regulation of VCM to levels of exposure below 1 ppm.

Very truly yours,



Howard L. Kusnetz, Manager
Safety & Industrial Hygiene

Enclosure

¹ Imperial Chemical Industries Limited, Plastics Division, Liver Angiosarcoma Cases. (Review Date: 1 May 1980)