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AMERICAN CONFERENCE

of

GOVERNMENTAL INDUSTRIAL HYGIENISTS



PLAINTIFF'S EXHIBIT

DOW-498

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April 6, 1970

File

APR 10 1970

Mr. Richard Henderson
Manager, Environmental
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Olin Research Center
275 Winchester Avenue
New Haven, Connecticut 06504

Dear Dick:

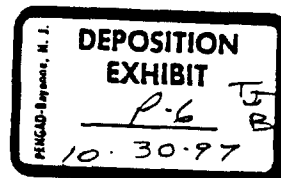
The TLV Committee met last week with V. K. Rowe present and final decision for the TLV for VINYL CHLORIDE was 200 ppm. This, as you will note, was the essential recommendation of Matchler at the Gordon Conference in 1968. Apparently, Dow hasn't seen any new evidence to alter this tentative recommendation.

Yours sincerely,

HES

Herbert E. Stokinger, Ph.D.
Chairman
Threshold Limits Committee

HESSTOKINGER:em



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OLI 1560

VINYL CHLORIDE VCI

50 ppm (Approximately 130 mg/m³)
C 200 ppm

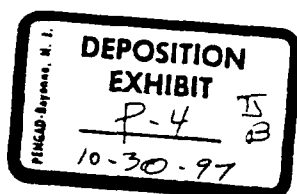
Vinyl chloride is a gas of relatively low systemic toxicity. Torkelson, Oyen and Rowe found that repeated seven-hour exposures at 200 ppm caused liver pathology in rabbits (1). Other investigators however report no evidence of injury at this level. At 100 ppm slight increases in the average weight of rat livers were noted. Other animals were unaffected by 100 ppm. On the basis of these findings, the above authors suggested a threshold limit of 50 ppm. Subsequent human exposure experience indicates a considerable factor of safety for intermittent exposures during the 8-hour day, and a good safety factor for the 8-hour daily exposure. The Soviet limit is 12 ppm (2).

The TLV of 50 ppm, with the provisions noted above, is recommended to protect against irritation and narcosis.

References:

1. Torkelson, T. R., Oyen, F., Rowe, V. K.: A.I.H.A. J. 22, 354 (1961).
2. Smelyanskiy, Z. B., Ulanova, I. P., Labor Hygiene and Occupational Diseases, Moscow, p. 7, (1959).

* VCI exposures also to vinylidene chloride (ca. 5 ppm). Possible TLV C 25 ppm. (acc. to Muehle + Kramer, Gordan Conf. T. H. UH 5 ppm, 90 days no effects)
VCI, Max air concentration was 160 ppm from 1950-1967 (Aug '68)



011-1970-00004084



Vinyl Chloride
Digital Process Information, Litigation Support
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OLI 1559

In 1961, The Dow Chemical Company reported that long-term (4½ to 6 months at what would correspond to normal working hours) VCM exposures of animals to down to 100 ppm VCM resulted in slight liver injuries, and recommended working exposure levels be reduced to 50 ppm.

This recommendation for worker exposure was not accepted by ACGIH. In 1962, on the basis of work done at Yale University, from which the authors concluded that 500 ppm offered an adequate safety margin for human exposure to VCM, ACGIH published 500 ppm as the recommended standard.

In 1971, the Occupational Safety and Health Administration (OSHA) established 500 ppm VCM as a national standard. This changed in April 1974 when OSHA, following voluntary disclosure by The B. F. Goodrich Company of liver cancer deaths possibly related to vinyl chloride exposure, set a temporary emergency standard at 50 ppm. Then, on May 10, citing the findings of an MCA-administered study that showed liver cancer in mice at 50 ppm, OSHA proposed a "no detectable" standard, as previously recommended by the National Institute of Occupational Safety and Health (NIOSH).

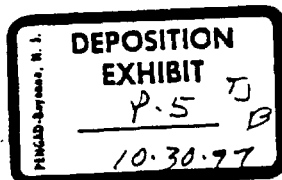
The following is a brief chronology of vinyl chloride activities, relating to worker health. It is based on MCA records and input from U. S. producers of VCM and/or PVC.

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