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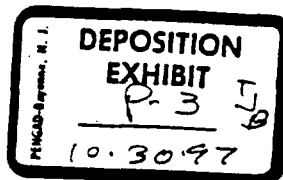
PLAINTIFF'S EXHIBIT

DOW-496

March 15, 1970

011-1970-00004082

Dr. Richard Henderson
 Olin-Mathieson Chemical Corporation
 275 Winchester Avenue
 New Haven, Connecticut 06504



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 (041) 122-1074

Dear Dick:

Regarding your concern over the TLV for VINYL CHLORIDE, I can't blame you. Following your call, I looked up the file on the Documentation for the TLV and found that it had been revised in 1962, following the report by Torkelson et al, AIHAJ, Oct. 1961, to 50 ppm. Why this limit was never published in the TLV booklet was the result of a subsequent publication by Lester et al, AIHAJ, 24, 265, 1963, that disagreed with the Dow investigators and reported evidence for the suitability of the 500 ppm limit. Despite a great deal of discussion with both groups, no reconciliation between the discrepancies was forthcoming, and there the matter lay.

I note, however, that Stewart, AIHAJ, 30, 537, 1969, evidently goes along with the 500 ppm limit, as this was one of the levels to which he exposed human volunteers repeatedly. Also, noted in the same article (Fig. 6), Vinyl Chloride concentrations were commonly as high as 200 ppm on some of the work shifts apparently in Dow Chemical's plants.

Speaking for myself, and not as a statement from the TLV Committee, I would think that a concentration not much in excess of 200 ppm should be a suitable limit on the basis that Dow Chemical's operating staff keep a pretty close watch on such matters, and if 200 ppm were too high, they would have reduced it in accordance with their supposed animal findings.

This I derived from a rather thorough discussion with the medical and environmental aspects of Vinyl Chloride workers at Dow Chemical Plant (Drs. Kramer, M.D. and Mutchler, Ph.D.) at the Gordon Conference in 1968. These individuals reported 25 years experience with Vinyl Chloride workers. Hundreds of thousands of air samples were taken over this period of time, and since 1959, continuous sampling was instituted, as well as breath analyses of the workers. The mean air concentration between 1950 and 1967 was 160 ppm, many of the values being well below 50 ppm. There was one maximum peak at 600 ppm. Selection of a suitable TLV is clouded by the fact that exposures to Dow Chemical's Vinyl Chloride are also to about 5 ppm of VINYLIDENE CHLORIDE at these levels. Summary data from Dow indicate fairly high toxicity of this substance, see enclosure.

Putting all of this information together, along with the '69 paper of Stewart, I would think that a TLV with a 200 ppm ceiling would be about as much as we should recommend. However, we will leave this matter up to the TLV Committee, which is meeting soon.

cc:
 Elkins, Grabois, Smith, Knauber,
 Caplan

Sincerely yours,

Herbert E. Stokinger, Ph.D.

OLI 1557