

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO Dr. Zeb Bell

FROM H. B. Lovejoy, M.D.

DATE April 4, 1978

SUBJECT EDC Work Practice Guidelines
Review dated March 29 from
Dr. Grant

I have several comments concerning the medical surveillance of employees whose work may allow exposure to EDC. The medical surveillance guidelines written by Dr. Grant are similar to those given on page 2 of the NIOSH Criteria for a Recommended Standard Occupational Exposure to Ethyl Dichloride, appearing March 1976. However, under the medical examination, 2a., no comment is made concerning more frequent (semi-annual) examinations after 10 years exposure. Perhaps this is not necessary, but as you will recall the Vinyl Standard requires this. Complete medical histories after the initial assignment would seem to me unnecessary. An interval history should be sufficient.

The designation SMA12 usually includes total protein, albumin, cholesterol, glucose, BUN, SGOT, uric acid, alk phos, LDH, calcium, bilirubin, creatinine. However, some laboratories or hospitals will do a phosphorus and not do a uric acid or creatinine. No SMA12 includes a SGPT and a GGTP which is required under the Vinyl Standard. These are probably the most sensitive commonly available liver tests.

I would feel that for the benefit of physicians and/or other responsible people (nurses, safety men, etc.) who may not be familiar with the background information on EDC that symptoms and signs of over-exposure at least be mentioned. Some recommendations should be made as to any condition that would prevent an employee from returning to work in the area of potential EDC exposure. References in the above cited NIOSH Criteria proposal refer to "cardiovascular, pulmonary, neurological, liver and kidney abnormalities" caused by exposure to EDC. I have not checked the original references because many of them are in Russian and Italian. Those indicate that these and possibly other functions (teratogenic effects) should be considered. Certainly the metabolites of EDC are capable of showing strong activity on the Ames test.

Perhaps we who have facilities to perform pulmonary function studies and electrocardiograms, should do them but not make it mandatory for those other PPG plants or PPG facilities who handle EDC.

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