

Modern Plastics
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February 4, 1974

Mr. Charles R. Carter
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6100 Oak Tree Blvd.
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Dear Chuck:

Enclosed is a checking copy of a Plastiscope report on VCM, to appear in the March issue. References are made to Goodrich's recent action regarding possible occupationally caused health problems

I'd much appreciate your reading this over for factual accuracy. If there are any corrections, will you let me know by Feb. 8, please? Sorry for the short deadline, but it cannot be helped.

Too bad the OSHA hearing occurs too late for a report in this (March) issue. I assume you are aware that notice of the Feb. 15 hearing was published in the Federal Register of Jan. 30.

Many thanks for everything, Chuck. Look forward to seeing you soon again.

Best regards,

Roland R. MacBride
Senior Editor, News

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Questions of VCM health safety persist, but the answers are coming.

If you remember your childhood poems, there's one that dwells on the cumulative impact of "little drops of water, little grains of sand..." By this time, producers and users of vinyl chloride monomer must feel that the "little drops of water" represented by isolated reports of health hazard are beginning to show signs of developing into the mighty ocean of the same verse. And it is not idle to speculate that the pile-up of purported evidence damning VCM on health-safety grounds could yet lead to severe use restrictions that would chop huge holes in the projected growth of rigid and flexible PVC--and not only for foods/beverages packaging.

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C. Lane*

The danger, of course, is that the health-safety issue could become an emotional one. If it does, it wouldn't be the first time that industry has been put into a restrictive box by regulations stamped into the lawbooks under the banner of consumer or worker protection, without a full evaluation of the situation. Remember the urgency of the 1971 New York city tax penalizing plastic containers?

It needn't work out that way, though. As noted in our last issue (Feb. MF, p. 18), nagging current questions about the potential toxicity of VCM--first for PVC liquor bottles, through residual monomer migration; then for meat-wrap film, through thermal degradation in hot wire cutoff--indicate that it is time for industry to make an all-out effort to help resolve the issue, and to put VCM's role into perspective.

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Opening the books. Probably the most damaging aspect of the as-yet unresolved questions raised about the health-safety factor in PVC liquor bottles and meat-wrap film is that the suspected potential hazards came to light after years of commercial experience. Thus, the federal stop order on bottles occurred after the plastic container had been all but cleared for unrestricted use, following "leaked" information on the possibility of excessive monomer migration.

Similarly, PVC film has for years been in wide and unquestioned use as a supermarket-level meat wrap. But a national butcher-workmen union's petition to the Occupational Safety & Health Administration, calling for a ban or sharp control on the material in retail packaging operations, resulted directly from a recent (November 1973) article in the Journal of the American Medical Assn., suggesting a causal relationship in the fact that three female workers had developed respiratory symptoms after exposure to the fumes of plasticized PVC film cut with a hot wire.

However tenuous the evidence of suspected health hazard may be, such outfalls do little for the credibility of suppliers. This is particularly so in light of the fact there is a paucity of historical documentation on the actual health effects of long-term exposure to VCM and many other materials. And that's really the root of the problem.

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C. Lane*

So, for the long-range good of industry and the public at large, it is encouraging to note that some producers are taking the initiative in calling attention to suspected hazards, and attempting to remedy them, rather than waiting for the axe to fall. Case in point: B.F. Goodrich Co., largest

domestic producer of PVC resins, has voluntarily reported to Kentucky health officials and the federal National Institute for Occupational Safety & Health (NIOSH) that it is investigating the cancer deaths of three employees at its Louisville, Ky., PVC plant during the 1971-1973 period, to determine if they were related to occupational causes.

All three workers were employed in the polymerization area of the Louisville facility. All three reportedly died of angiosarcoma, a rare liver cancer that is said to claim only about 20 victims annually in the U.S.

Goodrich has retained an independent health and safety consultant firm to investigate the situation. Findings will be supplied to interested state and federal agencies. The company notes that its open-book policy in this matter is in line with a longstanding program to minimize worker exposure to hydrocarbons throughout its operations. Exposure levels to VCM at all company plants, for example, are said to have been reduced to about one-tenth of the 500 parts/million threshold limit value prescribed by federal standard.

D-Day for VCM. As it happens, the issue of VCM's potential toxic effects, and the adequacy of existing threshold limit values for safe worker exposure, are matters that come under OSHA's broad franchise. It is likely that tighter standards for use and exposure may be written into the Occupational Safety & Health Act (see June 1973 MP, p. 55).

) The first steps are being taken. As this issue goes to press, OSHA has convened a one-day hearing in Washington at which it has requested industry and other interested parties to supply information on possible hazards associated with manufacture and use of the monomer. Intent of the hearing: to determine if available information warrants issuance of an emergency temporary standard on VCM, or commencement of regular rulemaking under powers provided by the law.

The extent of new federal controls on VCM may depend largely on the results of ongoing research to develop a body of meaningful literature properly defining the extent of hazard. Among the most exhaustive and advanced of such studies are two (involving inhalation and epidemiologic exposure of laboratory animals) that are being conducted for the Manufacturing Chemists Assn. No data are yet available from the chronic-inhalation study. However, the epidemiological test, scheduled to be completed next month, so far is reported to show no abnormal patterns of mortality between exposed and unexposed laboratory animals.

Meantime, OSHA has taken no direct action on the union petition to ban PVC film from retail meat-wrap operations. And film manufacturers reiterate that normal workplace controls--including adequate ventilation and maintenance of hot-wire cutoff temperature at manufacturer-recommended levels--are all that's needed to eliminate the "hazard."

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