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UNITED STATES DEPARTMENT OF LABOR
Occupational Safety and Health Administration

In the Matter of:

PROPOSED PERMANENT STANDARD
FOR OCCUPATIONAL EXPOSURE TO
VINYL CHLORIDE

DOCKET: OSH-36

POST-HEARING MEMORANDUM OF

THE B. F. GOODRICH COMPANY

In accordance with the provisions made for supplementing the Record in the above-referenced matter, The B. F. Goodrich Company (Goodrich) hereby respectfully submits the following for the consideration of the Assistant Secretary and the Occupational Safety and Health Administration's Office of Standards Development.

THE OCCUPATIONAL SAFETY AND
HEALTH ACT AND ITS IMPLEMENTATION

The Occupational Safety and Health Act of 1970 (hereinafter O. S. H. Act) was designed by Congress "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions." 29 U. S. C. Section 651(b).

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In order to meet this objective, the statute imposes a duty upon employers to provide a safe work place, 29 U. S. C. Section 654(a)(1), and establishes provisions for the promulgation of permanent standards where the Secretary has established an emergency temporary standard concerning a substance or agent determined to be toxic or physically harmful. 29 U. S. C. Sections 655(c)(1) and (3).

The hearing conducted by the Occupational Safety and Health Administration (hereinafter O. S. H. Administration) in the matter of the Proposed Permanent Standard for Occupational Exposure to Vinyl Chloride was pursuant to the above-mentioned sections of the O. S. H. Act and in furtherance of the objective of achieving feasible protection for employees.

The action of the Secretary of Labor in promulgating standards of this type is controlled by Section 655(b)(5) of the O. S. H. Act:

"The Secretary, . . . shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards . . . shall be based upon research, demonstrations, experiments and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws." (emphasis added)

The U. S. Court of Appeals for the District of Columbia in the case of Industrial Union Department, AFL-CIO v. Hodgson (No. 72-1713 decided

April 15, 1974) characterizes the difficult task of the Secretary of Labor where there is a necessity that the standard be set but less than perfect knowledge and information is available to do so:

"OSHA sets forth general policy objectives and establishes the basic procedural framework for the promulgation of standards but the formulation of specific substantive provisions is left largely to the Secretary. The Secretary's task thus contains 'elements of both a legislative policy determination and an adjudicative resolution of disputed facts.' Mobil Oil Corp. v. FPC, 483 F. 2d 1238, 1257 (D.C. Cir. 1973).

"... some of the questions involved in the promulgation of these standards are on the frontiers of scientific knowledge, and consequently as to them insufficient data is presently available to make a fully informed factual determination. Decision making must in that circumstance depend to a greater extent upon policy judgments and less upon purely factual analysis. Thus, in addition to currently unresolved factual issues, the formulation of standards involves choices that by their nature require basic policy determinations rather than resolution of factual controversies." (emphasis added)

In this case of setting a standard for exposure to vinyl chloride, the best available data does not dictate a standard of no detectable level in order to achieve the policy set forth in the statute. Certainly, the policy of the statute did not contemplate the total shutdown of a major industry and the serious societal and economic consequences that would follow.

This submission seeks to summarize: 1) some of the conclusions that are supported by substantial evidence when the record of the hearing is considered as a whole and 2) some comments, objections and recommendations on specific parts of the Proposed Standard.

- I. IT IS NOT TECHNOLOGICALLY FEASIBLE TO COMPLY WITH A STANDARD LIMITING EXPOSURE TO NO DETECTABLE LEVEL AND IF SUCH A STANDARD IS ADOPTED, THE INDUSTRY MUST SHUT DOWN.

The unanimous position of the Vinyl Chloride and Polyvinyl Chloride Resin Producers Committee (including Goodrich) of The Society of the Plastics Industry, Inc. (SPI) was that the Proposed Standard of no detectable level was not technologically feasible and if the standard were adopted, the industry would shut down. (Record, p. 351).

All industry technical experts testified that, because of the inherent technology of VCM-PVC manufacturer involving a batch process, multiple sources of fugitive leaks, the periodic necessity of opening and entering reactors, and necessary human activity in connection with production, it was not technologically possible to achieve a no detectable level of exposure.

In addition, industry technical experts testified that only through extensive and intensive research and development could the basic technology be improved and some inherent process losses be reduced.

Except for opinion from non-technical witnesses without technical or other support, no evidence was offered that such a level was achievable. Such non-technical witnesses attempted to extrapolate recent reductions in VCM work place exposure to a non-detectable level. Industry testimony establishes that, as one achieves lower levels, further reduction becomes more difficult and therefore extrapolation to no detectable level is not possible.

Thus, one must conclude that a standard of no detectable level cannot be adopted in accordance with the provisions of the O. S. H. Act and the courts' interpretation of that Act which require standards to be feasible.

Moreover, if such a standard is adopted by the Secretary of Labor, the industry could not comply and would be forced to close.

Vince P. Ficcaglia of A. D. Little, Cambridge, Massachusetts, testified that such a shutdown could result in a loss of 1.7 to 2.2 million jobs and a loss of domestic production value of \$65 to \$90 billion annually. (Record, p. 456). The General Motors' submission (Exhibit 85) not only substantiates A. D. Little but would indicate that the A. D. Little projections are conservative.

IUD v. Hodgson (referred to above) interprets Section 655 of the O. S. H. Act to mean that the Secretary of Labor is required to take technological feasibility into account when promulgating a standard. To do so in this case commands that the Proposed Standard of no detectable level be rejected.

II. SCIENTIFIC AND MEDICAL DATA IN THE RECORD DOES NOT SUPPORT THE STANDARD OF NO DETECTABLE LEVEL.

The Proposed Standard of no detectable level was not shown to be necessary to assure safe and healthful working conditions. As an alternative to the Proposed Standard, SPI made recommendations (Record, pp. 358-364) that the majority of the industry believed feasible and which allowed time to

achieve the levels specified. No evidence was submitted that the SPI recommendations were insufficient to satisfy the requirements of the O.S.H. Act.

That no detectable level proposal is based on the questionable assumption that animal data can be used to predict human response to vinyl chloride exposure. The record, however, does not contain any evidence whatsoever that animal data is sufficient to draw definitive conclusions about the effect of any particular concentration on humans.

In fact, the record establishes that there is no known, definitive, scientific method for translating animal test data to human response.

Dr. M. L. Keplinger (Manager, Toxicology, Industrial Bio-Test Laboratories) in his testimony, characterizes the relevance of animal data for prediction or extrapolation to effects on humans as "quite conjectural" (Record, p. 443). His statement also raises a question as to whether different animals have different latency periods. It is possible that the latency period in a human for exposure below 50 ppm is significantly beyond the normal life expectancy of a human.

Dr. Marcus M. Key (Dir. NIOSH) indicated that no study was known to him that definitively concluded that cancer was in fact caused in humans by a level of 50 ppm. (Record, p. 122).

More importantly, the record contains a great deal of information and data on human exposure for long periods at levels up to 200 ppm. (Record, p. 940 et seq.). This data, without incurrance of angiosarcoma, adequately

supports the levels suggested by the SPI and refutes the necessity for a no detectable level.

The Secretary must use the best data available to him, 29 U. S. C. Section 655(b)(5), but cannot go beyond data he has received to say that a hazard exists where such cannot be documented in any form that is not arbitrary and capricious.

The policy of the act speaks to employee safety and to set a standard that is not required by evidence of the hazard is not to effectuate the act but rather to step beyond both the factual evidence and the congressional delegation of legislative authority.

III. CERTAIN PROBLEMS EXIST, REGARDLESS OF THE EXPOSURE LEVEL OF THE PERMANENT STANDARD, THAT MUST BE ADDRESSED.

Labeling

Section 655(b)(7) of the O. S. H. Act requires labels "necessary to insure that employees are apprised of all hazards to which they are exposed." The testimony in the record indicates that the labeling in the Proposed Standard is unnecessary and inflammatory (for example see Record, p. 188, John Gmelch, New England Plastics). Recommendations of the SPI made by Jerome Heckman, Counsel to SPI (Record, pp. 346-349) were designed to meet the requirements of the Act and not to cause undue fear or other negative psychological responses.

Respirators

Because of provisions for the use of protective equipment while engineering controls are being instituted CFR 1910.93(q)(g), while emergency conditions exist CFR 1910.93 (q)(g), concerning certain operations CFR 1910.93 (q)(l), respirators are an important topic regardless of the level set for maximum exposure.

Individuals testifying on the use of respirators stated that usage problems would exist in the areas of worker mobility, fatigue, training, psychological response (including claustrophobia), maintenance, vision, communication, availability, fitting, and safety. The scope of the problem and possible solutions varied with the specific type of respiratory device in question. However, it was indicated that research and development in the area had increased in light of the VC problem and that improved devices including remaining life indicators on canister masks might soon be available to employers.

Perhaps the best approach with respect to respirators is that offered by Dr. Strassburg in suggesting that employers be given flexibility to select and utilize the most appropriate respiratory equipment.

We note the recently published (Vol. 4, Number 9 of BNA Occupational Safety & Health Reporter - August 1, 1974) Criteria Document Recommendations by NIOSH on ammonia and benzene where different types of respiratory protection are recognized for various levels of exposure in the work area. In

particular, the protection offered by cartridge or canister type respirators at lower levels of exposure is considered adequate from a safety standpoint.

Emergency

The Proposed Permanent Standard defines emergency as any release of vinyl chloride into work areas occupied by employees. Under this definition, emergencies would constantly exist.

We believe that emergency should be redefined so as to occur only when employees are exposed without protection to levels sufficient to produce acute medical symptoms. Emergency medical attention should then be required.

Timetable

Testimony was presented as to a need for time to comply with any standard. Such request for time is reasonable and not outside the time limits provided under the O. S. H. Act.

Section 655(c)(3) of that Act requires the Secretary to promulgate a permanent standard no later than six months after publication of the emergency standard. Our interpretation of this provision makes the deadline for promulgation October 5, 1974. This does not necessarily control the effective date as the standard itself could state a timetable for meeting lower levels as such becomes feasible. Compliance with any standard below 50 ppm could not be accomplished immediately on October 5, 1974. The Act itself

recognizes this problem as Section 655(b)(4) allows the postponement of the effective date for ninety days.

Measurement Sample

The current temporary standard is based on a ceiling limit of 50 ppm. Assuming that the permanent standard will be based on a technically achievable ceiling limit, it is necessary for the standard to address the period of time over which an air sample is taken for measurement. Theoretically, a ceiling value could be considered an instantaneous value, however this is not a practical approach. OSHA has already recognized this problem in the enforcement of the temporary standard by taking a 10 minute sample of air over charcoal. Similarly, a 10 minute sample could be taken in a glass or other type of container. These approaches result in a value based on a 10 minute average which should be the basis for determining the ceiling value.

For purposes of determining ceiling level exposures, sampling should not be done in areas where adequate protective respiratory equipment is worn.

The time weighted average (TWA) approach is not utilized in the temporary standard. Should TWA be adopted as part of a Permanent Standard, the standard should define the period of time over which the sample is taken. The time period should be adequate to extrapolate to a full days work period. In our judgment, a four hour sample should be adequate. Such sample

should exclude the period when the worker is wearing adequate protective respiratory equipment.

Our comments here are, of course, selective as to a few major points about which we wished to make special comment. In addition, The B.F. Goodrich Company supports the Society of the Plastics Industry position as set forth in its testimony at the hearing and in its Post-Hearing Memorandum.

Respectfully submitted,

THE B. F. GOODRICH COMPANY

By William C. Becker
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DATED: August 23, 1974