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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 SOCIETY OF THE PLASTICS INDUSTRY, INC.

ECONOMIC IMPACT STUDIES

The Society of the Plastics Industry, Inc. (SPI)<sup>1/</sup>, by its attorneys, hereby respectfully submits its Comments with respect to the Foster D. Snell Preliminary Report entitled "Economic Impact Studies of the Effects of Proposed OSHA Standards for Vinyl Chloride" commissioned by the Occupational Safety and Health Administration (OSHA) in connection with the above-referenced proceeding. These Comments are being submitted in accordance with the Notice concerning the

1/ The interests, composition and extent of participation of SPI in these proceedings is by now well known to the Department of Labor. A complete discussion of the interests of the Society is specifically detailed in its "Post-Hearing Memorandum of The Society of the Plastics Industry, Inc.-- Proposed Findings of Fact and Conclusions Supported by the Record," dated August 23, 1974.

economic impact study, published in the Federal Register on August 26, 1974 (39 Fed. Reg. 30844). Simultaneously, although we are aware of no formal notice published regarding the document prepared by the OSHA Staff (Evaluation and Research Division) entitled "An Economic Impact and Technological Feasibility Study For The Compounders, Processors and Fabricators of Polyvinyl Chloride Resins," included in the Record as Exhibit 172, this opportunity is being taken to comment briefly on that document as well. This would appear appropriate since the OSHA Staff document is internally characterized as constituting "Part II" of the overall, OSHA-ordered economic and technological feasibility review.

I

INTRODUCTORY STATEMENT

It should be recognized that commenting on the referenced preliminary reports presents some very unique problems. As will be noted hereinafter, there are a few rather easily identifiable portions of the Snell and OSHA reports which, it is submitted, contain significantly erroneous information or interpretations. The major problem presented, however, is that it is most difficult to submit pointed comments because neither of the preliminary reports actually set forth conclusions or recommendations. The right

to comment on any conclusions or recommendations ultimately included in the reports should be afforded all interested parties; thus, the right to comment in this area is hereby explicitly reserved.

Aside from this basic issue, the following observations are submitted with respect to the reports, it being urged that the documents in question be modified accordingly.

## II

### PRELIMINARY REPORT OF FOSTER D. SNELL, INC.

#### A. Specific Comments

1. At page V-6 the Preliminary Report states that "Firestone was the only PVC producer reporting the ability to meet a 'no detectable' VCM standard primarily using engineering controls." This statement is amplified by extrapolations set forth in Exhibits V-10(1) and (2) of the Preliminary Report. Furthermore, other data and information which we submit is based on this erroneous interpretation of the Firestone position has been woven into the report at several other places, as will be discussed below.

2. The Society hereby respectfully submits that the ability of Firestone to eliminate occupational exposure to vinyl chloride, reportedly based on both Foster D. Snell and Firestone data, comports with neither the information

presented orally by Firestone at the Hearings in this matter nor in any of its written submissions. In fact, Firestone has repeatedly stated, to the contrary, i.e. that it is of the opinion that it cannot achieve a no detectable level of vinyl chloride in the work place. (Tr. 1602, 1682, 1695-99, 1754 and 1822) Thus, since in point of fact Firestone has denied an ability to meet a no detectable standard, it is urged that all pertinent parts of the Preliminary Report must be altered to reflect the position actually articulated by Firestone, that is, that it is technologically infeasible to attain a non-detectable exposure level of vinyl chloride in the work place.

3. If the basic Firestone position were correctly stated in the Preliminary Report, other information contained therein and based on the Firestone statement at the Hearings and the studies it presented to OSHA, should be reflective of the information as presented. To accomplish this, consistency would demand that the following changes be made:

- a. Exhibits V-10(1) and (2), both entitled "Estimated Cost for the Firestone Tire and Rubber Company to Achieve a 'No Detectable' VCM Level," should be deleted in their entirety;

b. Exhibit V-12: the figures presented in the chart under the headings "Information on the Direct Cost of Compliance," "Cost to Make Up for Loss of Productivity," "Total Costs," and "Compliance Period Required For Engineering Controls" and aligned across from the heading "No Detectable" should be deleted and replaced by the term "Not Applicable"; and

c. Exhibits V-14(1) and (2): the last column on the right in each of these tables entitled "1 ppm Ceiling-1 ppm TWA" should be deleted due to lack of factual support for the same contained in the study.

The items listed and any others based on the interpretation of the information concerning the Firestone position should be deleted or altered to accord with the actual Firestone position.

4. It is respectfully submitted that the changes suggested above with regard to information concerning Firestone are justified by the information in the Record, the studies and analyses made by Firestone notwithstanding. The fact of the matter is that each of the vinyl chloride

and polyvinyl chloride resin producers conducted some type of study in an attempt to determine how a "no detectable" occupational exposure level to vinyl chloride could be achieved. All of these studies, including that made by Firestone, concluded that attaining such an exposure level was technologically infeasible. The only difference is that Firestone put a price tag on every action it contemplated. Nevertheless, Firestone was unable to define a means for achieving the "no detectable" occupational exposure level set in the Proposed Permanent Standard. (Tr. 1725, 1749, 1750 and 1819) The Firestone Study is, therefore, not an answer to the economics of achieving a no detectable exposure level. On the contrary, the costs shown reveal that compliance with the proposal cannot be achieved despite the projected capital expenditures.

5. Also included in the Preliminary Report are two references to the reported ability of a VCM producer to operate its vinyl chloride monomer plants at a 1 ppm ceiling and a 1 ppm TWA. This could only be based on information supplied by Dow Chemical U.S.A. which, we believe, has been misinterpreted. The first reference is in Note (2) to Exhibit V-6. The second is in Note (2) to Exhibit V-13.

6. It is respectfully submitted that the Record does not support these statements. Even though Dow indicated

that it could achieve low levels of occupational exposure to vinyl chloride in its monomer plants, it stated unequivocally at the Hearings that it was infeasible to operate within the parameters of the Proposed Permanent Standard. (Tr. 884-901) Accordingly, it is suggested that the two referenced Notes be deleted from the Report inasmuch as they reflect an inaccurate interpretation of the Dow position.

B. General Comments

7. The Proposed Permanent Standard raises a central question regarding the technological feasibility of compliance. The vinyl chloride and polyvinyl chloride resin producers are unanimous in their view that the achievement of a no detectable level of vinyl chloride in existing and planned manufacturing facilities is technologically infeasible. Consequently, the Society is not prepared to discuss the specific costs of achieving a no detectable or 1 ppm occupational exposure level because the technology required to reach this goal is unknown to the Society and its members and, therefore, the costs related to this technology are obviously incalculable.

8. Nevertheless, a few general, but nonetheless important, observations are in order concerning the costs associated with taking certain actions and/or achieving

specific goals as set out in the Preliminary Report. Although these comments are being made without the benefit of particular knowledge about the methodology employed by Foster D. Snell to arrive at the figures tabulated throughout the Report, cost estimates for accomplishing certain objectives and/or for the achievement of set levels of occupational exposure to vinyl chloride are substantially understated.

9. Firstly, many cost factors requisite to this type of analysis have not been made or even referenced. The Preliminary Report does not address, for instance, the costs to some companies of reducing the residual monomer content in the various types of resins. Similarly, the economic impact of the inevitable United States Environmental Protection Agency Regulations for the control of vinyl chloride emissions have not been estimated or even noted as a potential cost that should be expected to at least "affect" cost and price considerations. The potential effects of actual plant closings expected to occur should OSHA's Permanent Standard ultimately set a very stringent level of occupational exposure to vinyl chloride are also not detailed, even though such would certainly be expected to alter the supply-demand outlook.

10. Additionally, the Foster D. Snell Preliminary Report finds fewer companies stating that they can reach the SPI recommended exposure levels. This should be noted as actually bolstering the industry position with regard to the technological infeasibility of the Proposed Permanent Standard. Individual company confidence in being able to attain compliance with even the SPI recommendations has been eroding as lead times for attaining equipment expand, as capital costs rise rapidly, and as the prospects for financing these projects becomes dimmer. The demands for equipment and money are out-pacing supply and the net effects of this situation must also be costed out, that is, if the goals remain within the realm of feasibility. For example, delivery times for equipment have risen from the 16-18 months indicated by Snell to about 28 months at present; new plant construction time is also up from 30-36 months to 42-48 months.

11. Finally, the price tags attached to compliance with varying exposure levels are stated in absolute terms. Considering the continuing variation in prices for raw materials, it is suggested that the approach in the Preliminary Report of using calculations in absolute figures is not meaningful. For example, the price quotations for the cost of vinyl chloride monomer were already out of date when the Preliminary Report was made available. It is

respectfully submitted that, instead of employing absolute terms, the costs should be calculated in terms of their variance from a given constant. That is, given a base, known cost factor, the other costs and prices could be more intelligibly stated in terms of the percentage or actual cost change from the base figure. Such calculation methodology would obviate confusion and misunderstanding about compliance costs posited in terms of absolute values.

12. A final important point to be made with regard to the Preliminary Report is that, although the Report contains other mechanical errors which will undoubtedly be corrected, there is one very important typographical correction that must be made. In Exhibit III-17, the current residual vinyl chloride monomer level for exemplary general purpose suspension-type resin is stated as 50 ppm. That figure is in error and should be changed to read 500 ppm.

### III

OSHA STAFF REPORT ENTITLED  
"AN ECONOMIC IMPACT AND TECHNOLOGICAL FEASIBILITY  
STUDY FOR THE COMPOUNDERS, PROCESSORS AND  
FABRICATORS OF POLYVINYL CHLORIDE RESINS"

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13. It should first be noted that the typographical error in the Snell Preliminary Report which showed general purpose suspension resin with a residual monomer level of 50 ppm rather than 500 ppm has been carried over into this

Report in Subsection 5.4. The OSHA Staff should also correct its Report as indicated above.

14. In Section II on the background and research for the Proposed Standard, this Report contains subsections on medical research and ongoing studies concerning the effects of exposure to vinyl chloride. The Report regrettably fails to include several significant elements of available research. Specifically, the Report does not give the details of or even list the human experience data submitted to OSHA by Air Products, Diamond Shamrock, Dow and Union Carbide. These submissions include extensive epidemiological data and, in the case of the Dow studies, considerable information about actual human exposure to known concentrations of vinyl chloride. Although the details of these studies are contained in the Record, none are listed in this Report as "major pieces of bio-statistical evidence." A correction in this respect is clearly in order.

15. Finally, this Report's Subsection 5.5 details extensive compliance costs for medical surveillance, monitoring and personal protective equipment but finds that compliance cost information for compounders, processors and fabricators is not readily available. The Society is of the view that such is not the case. The issue here, detailed at length in the Record, is two-fold. First, the Proposed Permanent

Standard is not applicable to the situation as it exists in this portion of the industry. Second, because of this inapplicability, the compliance mechanics are, on both the physical and economic planes, unduly burdensome. Therefore, the Society respectfully submits that compliance costs for compounders, processors and fabricators can be estimated and that such estimates illustrate that the requirements of the Proposal are physically and economically infeasible for this segment of the industry.

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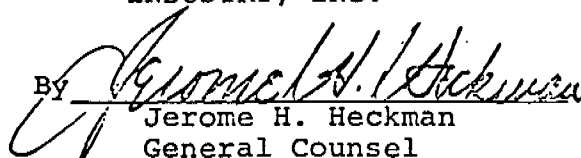
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All the foregoing considered, it is respectfully urged by The Society of the Plastics Industry on behalf of the entire industry that the recommendations made be considered and that the two Reports be modified accordingly.

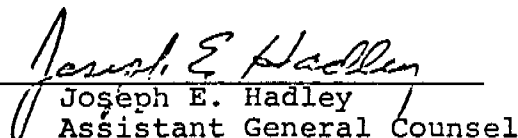
Respectfully submitted,

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