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CHEMICALS
RESEARCH

August 23, 1974

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Docket Officer
Docket OSH-36
Room 230
1726 M Street, N.W.
Occupational Safety and Health Administration
Washington, D. C. 20210

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Dear Sir:

Reference is made to the Proposed Standard for vinyl chloride as published in the Federal Register, pp. 16896 - 16900, Vol. 39. No. 92 - Friday, May 10, 1974. In addition to the comments we filed in our letter of June 27, 1974, we wish to add the following comments.

Continental Oil Company fully supports the "Post - Hearing Memorandum of Proposed Findings of Fact and Conclusions Supported by the Record" submitted by The Society of the Plastics Industry, Inc. In addition to the comments filed in this memorandum, we wish to help clarify one point in the Proposed Standard.

The Proposed Standard is somewhat ambiguous on the status of pelletized PVC compound. Although we consider it to be "extrusion stock" under the definition of "Fabricated Product" and hence be exempt from the Regulation, there may be confusion because pelletized compounds are also used in other processing operations (e.g., injection molding). Our direct knowledge of pelletized PVC compounds is limited to pelletized flexible (versus rigid) PVC compounds, and we will address ourselves to this type of product only. We believe that there is adequate data to support the contention that for all intents and purposes, pelletized flexible compounds are indistinguishable from other fabricated products and, therefore, the definition found in 1910.93q (b)(10) should be clarified as follows:

"Fabricated product" means a finished product or part of such product, made of polyvinyl chloride, entirely or in part, including semifinished products such as film, sheet, block, bar, extrusion stock, or pelletized compound.

The principal common characteristic of fabricated products from vinyl polymers is that they have passed through some kind of mechanical process in which the vinyl polymer is heated and rendered essentially molten, a condition often described by terms such as "fluxed" or "fused." The molten mass is then passed through a mechanical shaping device such as die or mold or calendering rolls, after which it is cooled to an essentially solid condition and retaining the shape imparted to it. Such fabricated products are usually ready for subsequent use; e.g., upholstery, coated wire, gasketing. These latter are generally used in other plants which incorporate them into final products.

Docket Officer
August 23, 1974
Page 2

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The exemption of plants handling such fabricated products from the need to meet the Standard for vinyl chloride is reasonable since the processing steps that lead to the fabricated product can be expected to reduce the residual vinyl chloride level to an extremely low value. Thus, the fabricated product can be handled in subsequent downstream plants without concern.

The foregoing can also be said about plasticized (flexible) compounds based on vinyl chloride polymers:

- They are manufactured in a primary plant by bringing the composition to a molten state.
- They are typically shaped into continuous belts via a mill or continuous strands by extrusion. These steps are strictly analogous to typical shaping steps in the manufacture of "fabricated products."
- The belt or strand is cut into pellets by a mechanical cutter and the pellets are then brought to a secondary plant to be used in making a product of a specific size and shape, which may be useful itself or be incorporated in a further product structure such as an automobile.

In support of these qualitative conclusions, our data indicates that the residual vinyl chloride content of typical fabricated products is extremely low, as indicated below:

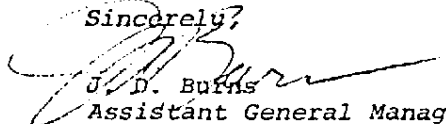
<u>Product</u>	<u>Residual VCM (ppm)</u>
Laboratory Tubing	less than 1
Electrical Cable Coating	less than 1
Calendered Sheet	less than 1
Medical Tubing	less than 1

Data on pelletized flexible compounds indicate that the residual vinyl chloride content in these products are in the same range as other "fabricated products." The most extensive data collected on this subject was presented at the Public Hearings by Rodney P. Becker of Diamond Shamrock Chemical Company. The data presented indicate that the residual VCM content of pelletized flexible compound ranges between 2 ppm and less than 1 ppm (Refer to Appendix 1, Table 1 of Exhibit 20 R).

From a worker safety standpoint, the most important consideration is the vinyl chloride exposure potential in processing pelletized flexible compound. Our sampling of the typical work areas in 6 plants that process pelletized flexible compounds showed that the vinyl chloride exposure levels were all less than 1 ppm. This data corroborates that given in Appendix 1, Table 2, Exhibit 20 R (Rodney P. Becker, Diamond Shamrock Chemical Company), as well as that presented by Phillip J. Weaver of the B. F. Goodrich Chemical Company (p. 4, Exhibit 20 S).

We believe that this is sufficient information on which to adopt our recommended clarification.

Sincerely,


J. D. Burns
Assistant General Manager
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