ENCLOSURE 7

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
WASHINGTON, D.C. 20210

DEC 17 1975

Mr. R. S. Brookman, Manager
Research, Development and Technical Services
Firestone Plastics Company
Pottstown, Pennsylvania 19464

Dear Mr. Brookman:

In response to your letter of July 14, 1975, petitioning for modification of the Vinyl Chloride Standard, the following determinations have been made:

1. 29 CFR 1910.1017(b)(5) Definitions

In regards to the definiton of "massive release" in Program Directive #200-35, we agree that the definition should be modified. This will be addressed in a future program directive. In all probability the stipulation of 100 ppm will be removed.

2. 29 CFR 1910.1017(b)(6) Definitions

The standard defines a fabricated product as being one which is "made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride."

"Release of vinyl chloride" means the release of an amount of vinyl chloride which would likely result in employee exposure at or above the action level without regard to the use of engineering controls. Products which can be classified as fabricated products are exempt from the provisions of the vinyl chloride standard. All other products are subject to the requirements of the standard. If the employer uses or manufactures a product which is not a fabricated product, he must initiate monitoring procedures. If the monitoring reveals that the employees are not exposed to vinyl chlorid at or above the action level, the employers' operations will be exempt from the provisions of the standard.

OLI 2828

However, if the monitoring reveals exposure at or above the action level, the employer must implement the procedures specified in the standard.

3. 29 CFR 19101.1017(g)(4)(iii) Respiratory protection

Regarding your suggestion to add a Type C, Supplied Air Respirator, Pressure Demand type, with full or half face-piece to this section:

If an employer can show that a respirator provides equal or greater protection than those specified in the standard, he may be granted an interim order or a variance from the standard. Your company received such an interim order, dated May 30, 1975.

4. 29 CFR 1910.1017(k) Medical surveillance

There is no OSHA regulation requiring an employee to submit to a medical examination. If the employee refuses any medical examination required to be provided by the employer, the employer shall inform the employee of the possible health consequences of such refusal and obtain a signed statement from the employee indicating that the employee understands the risk involved by refusal to be examined.

We greatly appreciate your sharing data, experience and knowledge with us. At the present time there are no plans to formally amend or modify the vinyl chloride standard. We hope that the above clarification of the regulation will satisfy the request in your petition. Should you have furth r questions please do not hesitate to contact us.

Sincerely,

Barry J. White
Associate Assistant Secretary
for Regional Programs

Copy to T. C. Walker 12/26/75

Copies to: Mr. W. B. Connolly, Jr.
Mr. J. J. Cassidy, Jr.
Mr. C. J. Kleinert
Mr. F. F. Hoy
Mr. R. W. Arnold
Mr. H. N. West
Mr. G. D. Lloyd
Mr. R. A. Park

OLI 2829

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
WASHINGTON, D.C. 20210

DEC 17 1975

JAN 02 1975
R N WHEELER JR.

Mr. R. R. Wheeler, Jr.
Vinyl Chloride Resins Manager
Union Carbide Corporation
270 Park Avenue
New York, New York 10017

Dear Mr. Wheeler:

This is in response to your joint letter with Mr. John Whittlesey dated June 17, 1975, petitioning for modifications of the Exposure to Vinyl Chloride Standard, 29 CFR 1910.1017 (formerly 1910.93 recodified May 28, 1975).

There are no plans presently to amend the Vinyl Chloride Standard. A revised program directive is contemplated, although we are not certain as to the date it will be available. Please be assured that your comments and suggestions are greatly appreciated and they will be considered fully in the revision of the program directive. In the meantime, the following administrative decisions have been made:

1. 29 CFR 1910.1017(a) and (b)(6) Scope and application (2), (3) and (b) Definitions (6)

The standard defines a fabricated product as being one which is "made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride."

"Release of vinyl chloride" means the release of an amount of vinyl chloride which would likely result in employee exposure at or above the action level without regard to the use of engineering controls. Products which can be classified as fabricated products are exempt from the provisions of the vinyl chloride standard. All other products are subject to the requirements of the standard. If the employer uses or manufactures a product which is not a fabricated product, he must initiate monitoring procedures. If the monitoring reveals that the employees are not exposed to vinyl chloride at or above the action level, the employer's operations will be exempt from the

provisions f the standard. However, if the monitoring reveals exposure at or above the action level, the employer must implement the procedures specified in the standard.

2. 29 CFR 1910.1017(b) Definitions (5).

The petition requests that the definition of "emergency" be revised to include specific examples, such as fire and explosion. We agree that the definition might well be expanded to include examples. Again, this matter will be addressed in a program directive and not as an amendment to the standard.

The definition of a "massive release" as being "greater than 100 parts per million (ppm)" found in the current Program Directive #200-35, will also be addressed in a revised directive. We agree that the 100 ppm should be changed.

3. 29 CFR 1910.1017(d) Monitoring (4)

The intent of paragraph (d)(4) is that the employer shall be 95% confident that his monitoring result is within 25%, 35% or 50% of the actual value depending on the concentration. Therefore, an employer using a method which has proven vinyl chloride detection accuracy of 25% or less need take only one measurement regardless of the actual vinyl chloride monomer concentration. In concentration ranges where accuracies of 35% or 50% are required, the employer need take only one measurement if the method accuracy is less than the specified accuracy. With methods of unknown accuracy or having errors greater than the specified accuracy requirements, repeated measurements are necessary. In these cases, one may use the coefficient of variation (CV) as a parameter to judge whether or not a sampling procedure is adequate to meet the standard. The CV in percentage units is defined as the standard deviation of the method, times 100, divided by permissible exposure limit. The required CV of the procedure is obtained by dividing the required accuracy by 1.96 (Z value for 95% confidence). Thus, for accuracies of 25%, 35% and 50%, method CV values should be less than 12.8%, 17,9%, and 25.5% respectively.

To repeat, there are no plans presently to amend the standard but your comments on monitoring will be considered in the program directive revision and also in future rulemaking where monitoring is a requirement.

4. 29 CFR 1910.1017(j) Training.

The standard does not specify a level of exposure to trigger training activities. Section 6(b)(7) of the Occupational Safety and Health Act of 1970 provides that employees shall be apprised of the nature of the hazardous substances with which they come in contact.

The evidence we have compiled on vinyl chloride has indicated that it is sufficiently hazardous to warrant training for all personnel who have any possibility of coming in contact with vinyl chloride. There is always the opportunity for accidents to occur and employees should be aware of the possible consequences. There has also been some indication that storage containers may yield high concentrations of vinyl chloride when opened after transporting.

Therefore, it is not likely that the training provisions will be amended. For those operations covered by the standard, training is a requirement.

5. 29 CFR 1910.1017(e), Signs and labels (4)

If there are situations where the blended polyvinyl chloride must be labeled yet contains less than 0.5 ppm residual vinyl chloride monomer, the following wording may be used:

BLENDED POLYVINYL CHLORIDE (PVC)

CONTAINS TRACE AMOUNTS (0.5 ppm)

OF VINYL CHLORIDE.

VINYL CHLORIDE IS A CANCER-SUSPECT AGENT.

We hope that the above clarifications will satisfy your petition for modification and amendment of the vinyl chloride standard. As previously stated, there are no plans presently to formally amend the standard. There will be an addendum or modification of the Program Directive #200-35. Should you wish to discuss any matter further do not hesitate to contact me or members of my staff.

Sincerely,

Barry J. White
Associate Assistant Secretary
for Regional Programs

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
WASHINGTON, D.C. 20210

DEC 17 1975

RECEIVED
DEC22 1975
APCI CHEM. GROUP
LAW DEPT.

Mr. Raymond H. Schenck
Attorney
Air Products and Chemicals, Inc.
Five Executive Mall
Swedesford Road
Wayne, Pennsylvania 19087

Dear Mr. Schenck:

This is in response to your letter of June 30, 1975 to Assistant Secretary John H. Stender petitioning for the modification of 29 CFR 1910.1017(b)(6), (formerly 29 CFR 1910.93q(b)(6) recodified May 28, 1975), Exposure to Vinyl Chloride, Occupational Safety and Health Standards.

29 CFR 1910.1017(b)(6) defines a fabricated product as being one which is "made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride."

"Release of vinyl chloride" means the release of an amount of vinyl chloride which would likely result in employee exposure at or above the action level without regard to the use of engineering controls. Products which can be classified as fabricated products are exempt from the provisions of the vinyl chloride standard. All other products are subject to the requirements of the standard.

There are no plans presently to formally modify the vinyl chloride standard. Therefore, we hope that the the above clarification of the regulation will satisfy your petition request.

Should you have further questions, please contact me or members of my staff.

Sincerely,

Barry J. White

Barry J. White
Associate Assistant Secretary
For Regional Programs

OLI 2834

Air Products and Chemicals, Inc.
CHEMICALS GROUP
Five Executive Mall, Swedesford Road, Wayne, Pa. 19087

June 30, 1975

Honorable John Stender
U.S. Department of Labor
Occupational Safety and
Health Administration
1726 M Street N.W.
Washington, D.C. 20210

Re: Petition for Amendment of
29 CRF Section 1910.1017

Dear Mr. Stender:

Pursuant to 29 CFR Section 1905.3, Air Products and Chemicals, Inc. ("APCI") hereby petitions for an amendment to the definition of "fabricated product" as set forth at 29 CFR Section 1910.1017(b)6. Other petitions for an amendment to the definition of "fabricated product" have been submitted by Dow Chemical U.S.A. and Union Carbide Corporation. The purpose of this proposed amendment is to expand the scope of the fabricated products exemption as it applies to certain resins and compounds (homopolymers or copolymers of vinyl chloride) which contain residual vinyl chloride monomer at levels so low that fabricator and transportation employees working with such low residual level product would not be exposed to concentrations of vinyl chloride in excess of the action level of .5 ppm 8-hour TWA.

Proposed Amendment

It is specifically requested that 29 CFR Section 1910.1017 (b) 6 be amended to read as follows:

"(6) 'Fabricated product' means a product made wholly or partly from polyvinyl chloride

(i) which does not require further processing at temperatures, and for times sufficient to cause

OLI 2835

mass melting of the polyvinyl chloride resulting in the release of vinyl chloride to the workplace atmosphere in excess of the action level; or

(ii) which does not contain more than .0050 weight percent (50 ppm) of residual vinyl chloride

Rational for the Proposed Amendment

The vinyl chloride standard (29 CFR Section 1910.1017) is complex, difficult to administer, and contains many burdensome requirements on employers. It requires the use of sophisticated and expensive monitoring and analytical equipment. These burdens are particularly oppressive to small businesses which manufacture fabricated products from polyvinyl chloride.

Subsection (d) of the existing standard requires each establishment to carry out a program of initial monitoring and measurement to determine if employee exposure to vinyl chloride monomer ("VCM") is in excess of the "action level." As shown in the attached exhibits covering a wide range of materials and a large variety of fabricating establishments, the residual vinyl chloride content of the polyvinyl chloride being processed can be well above 50 ppm without there being any employee exposure in excess of the action level.

Currently, if a fabricator is processing material containing less than 50 ppm residual VCM, he must nevertheless carry out the program of initial monitoring. Although this is a needless and burdensome exercise at this residual level, the burden is not thereafter lifted. Further monitoring is required "whenever there has been a production, process or control change, or the employer has any other reason to suspect that any employee may be exposed in excess of the action level."

Accordingly, a fabricator might have to remonitor whenever it changes its supplier of resin, the grade of

resin, the time or temperature of melting, its ventilating equipment etc.

It is submitted that so long as the residual level of VCM in the resin is less than 50 ppm (this could be certified by the resin producer) neither the initial nor the subsequent program of monitoring is necessary or appropriate. Accordingly, fabricators processing material containing less than 50 ppm residual VCM exclusively would be relieved of the burdens of the standard.

The requested redefinition of "fabricated product" would also serve to simplify the transportation and export of resins and compounds falling within the new definition. Petitioner is currently encountering resistance on the part of foreign purchasers of its PVC resins and compounds because of the warning lables required by 29 CFR Section 1910.1017(1)4. It is submitted that such labels are unnecessary for polyvinyl chloride containing low residual levels of VCM. Government regulations in such foreign countries generally do require such labelling, and foreign purchasers in such countries are alarmed. Although it is clear that OSHA has no authority to require such labels on contaners of PVC after they have left the United States, OSHA does have the authority to require such labels so long as the product is in the United States and subject to handling by United States workers. It is impractical to remove the warning labels after the product has left the United States. The proposed amendment to the definition of "fabricated product" would serve to obviate the necessity of warning labels on containers of polyvinyl chloride containing low residual VCM.

In addition to granting relief as aforesaid, the redefinition of "fabricated product" would serve as an incentive to polyvinyl chloride producers to manufacture product containing less than 50 ppm residual VCM.

Data in Support of the Proposed Amendment

The data in the attached table provide the basis for this Petition. These data represent those monitoring

results taken at fabricators' plants in recent months where the residual VCM level of the raw materials was known. Petitioner has many other monitoring results in which the residual VCM level of the material was not measured (but which from operating experience we believe to be in the same range) that confirm these findings.

All results below 0.01 ppm for the 8-hour TWA have been reported as N.D. (Not Detectable) because of the demonstrated sensitivity of the carbon absorption method published by NIOSH. Differences in reported results in this range are not significant.

We believe that these data justify the requested amendment to the definition of "fabricated product," and solicit your serious consideration. We will be glad to discuss this further with your staff if you so desire.

Very truly yours,

AIR PRODUCTS AND CHEMICALS, INC.

Raymond H. Schenck

Raymond H. Schenck
Attorney

RHS*swc

bcc: A. R. Adams
J. T. Barr
R. Fleming
J. V. Heider/file

FABRICATORS EMPLOYEES EXPOSURE TO VINYL CHLORIDE

8-Hour TWA By The Suggested NIOSH Method

Date	Type of Operation	Material Used	VCM Content - PPM	Job Function	8-Hr TWA
Apr. 23, 1975	Film Extrusion	Compound	1.5	Extruder Operator	ND
Apr. 20, 1975	Injection Molding	Compound	2.3	Molding Operator	ND
Apr. 13, 1975	Pipe Extrusion	Resin	221	Inspector	0.03
				Mixer Operator	0.49
				Extruder Operator - A	0.02
				Foreman	ND
				Extruder Operator - B	0.04
				Extruder Operator - C	0.02
				Extruder Operator - D	0.05
				Extruder Operator - E	0.01
Apr. 10, 1975	Record Pressing	Compound	85	Mold Operator - A	ND
				Mold Operator - B	ND
				Mold Operator - C	ND
				Flexible Film Operator	0.02
				Scrap Grinder	0.19
Apr. 8, 1975	Film Manufacture	Compound	18.0	Extruder Operator	ND
				Vacuum Forming	ND
Mar. 20, 1975	Extruder	Compound	29.3	Extruder Operator - A	ND
				Extruder Operator - B	ND
				Scrap Grinder	0.03
		Resin	20.2	Blender	ND
Mar. 11, 1975	Injection Molding	Compound	66	Operator	0.01
6, 1975	Injection Molding	Compound	157	Operator	0.01

OIL 2839

FABRICATORS EMPLOYEES EXPOSURE TO VINYL CHLORIDE

Date	Type of Operation	Material Used	VCM Content - PPM	Job Function	8-Hr TWA
Feb. 25, 1975	Film Extrusion	Compound	27	Extruder Operator	ND
				Winder Packer	ND
Feb. 5, 1975	Record Molding	Compound	36	Mold Operator - A	ND
				Mold Operator - B	ND
				Flexible Disk Operator	0.03
				Scrap Grinder	0.08
Feb. 4, 1975	Injection Molding	Compound	8.7	Molding Operator	ND
Feb. 3, 1975	Film Extrusion	Compound	7.9	Extruder Operator - A	ND
				Extruder Operator - B	ND
Jan. 23, 1975	Cove Molding	Resin	12.8	Compounder - A	ND
				Compounder - B	ND
				Compounder - C	ND
				Extruder Operator	ND
				Inspector	ND
Jan. 22, 1975	Flexible Profile	Resin	18.9	Hopper Loader	0.04
				Extruder Operator - A	ND
				Extruder Operator - B	ND
				Mixer Operator - A	0.09
				Mixer Operator - B	0.10
Jan. 15-17, 1975	Shoe Soles	Resin	14.9	Blend Conveyor Operator	ND
				Mixer Operator - A	0.15
				Molding Operator - A	ND
				Molding Operator - B	ND
				Mixer Operator - B	0.34
				Molding Operator - A	ND
				Molding Operator - B	0.29
				Grinder Operator	0.14

OLI 2840

FABRICATORS EMPLOYEES EXPOSURE TO VINYL CHLORIDE

Date	Type of Operation	Material Used	VCM Content - PPM	Job Function	8-Hr TWA
Jan. 15-17, 1975 (cont'd)				Mold Operator - C	ND
				Mold Operator - D	ND
				Weigh Man - A	0.16
				Mixer Operator - C	0.01
				Mold Operator - E	0.03
				Weigh Man - B	ND
				Mold Operator - F	0.01
				Mold Operator - G	ND
Jan. 13, 21, 1975	Flexible Compound	Resin	5.7	Foreman	0.01
				Mixer	0.04
				Bagger	0.02
				Extruder	0.02
				Helper	0.01
Jan. 10-16, 1975	Flexible Profile Extrusion	Resin	2.2	Extruder Operator - A	0.02
				Extruder Operator - B	ND
				Mixer Operator	0.41
				Hopper Operator	0.05
				Extruder Operator - C	0.02
				Extruder Operator - D	0.02
				Fuser Operator	0.04
Jan. 10, 1975	Injection Molding	Compound	36.8	Molding Operator	ND
Jan. 7, 1975	Injection Molding	Compound	54	Operator	ND
				Helper	ND
Dec. 17, 1974	Citation	Compound	103	Operator - A	ND
				Operator - B	ND
				Operator - C	ND
				Operator - D	ND
				Operator - E	ND

OLI 2841