

B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY

8100 OAK TREE BOULEVARD · CLEVELAND, OHIO 44131 · PHONE 216-524-0200

ANTON VITTONI
DIVISION PRESIDENT

July 16, 1974

Mr. David R. Bell
Office of Standards Development
Room 500
1726 M Street N. W.
Washington, D. C. 20210

Dear Mr. Bell:

Pursuant to the Memorandum dated June 17, 1974 from John H. Stender, Assistant Secretary of Labor, we have the following comments regarding the Draft Environmental Impact Statement (DEIS) on Proposed Regulation - Vinyl Chloride.

DEIS is a commendable effort by a number of people to educate themselves quickly to a very complex problem through readily available publications and a walk through survey of seven plants located in the Southern part of the United States.

The conclusions drawn from such an effort by both the survey group in Appendix C and the authors of the DEIS applied to the 15 monomer plants (mostly Southern and open locations) and the 36 polymer plants (mostly Northern and closed locations) seem to be unsupported.

We note a number of inaccuracies in reporting published information, but, since we understand the DEIS will be redone taking into consideration all information presented at the recent hearing, we will comment on only a few errors.

It appears that the DEIS is based on certain assumptions which are not supported by fact, namely:

1. That the proposed permanent standard for a non-detectable level of exposure to VCM means exposure to a ceiling level of 1 ppm.
2. That it is technically feasible by engineering changes to operate VCM and PVC plants under a 1 ppm ceiling standard and that, while such engineering changes are being made, it is feasible to operate with workers in self contained air supplied masks and whole-body air supplied suits.

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The possibility of engineering or re-engineering to meet the proposed standard is discussed on page 62. There is no data offered to support technological feasibility, except to say that "costs could be very substantial". Also, there is recognition that the use of "required personal protective equipment may reduce the productivity of a worker through reduced mobility", but again, no comment as to the discomfort and health and safety hazards to the individual through such use.

OSHA Industrial Hygienists conducted an on-site survey in March, 1974 (Appendix C) of five vinyl chloride manufacturing facilities and two PVC plants in the Baton Rouge-New Orleans area. From this survey, the following conclusions were drawn:

- "2. The PVC manufacturers have a more serious problem of VCM exposure than the VCM producers because most of the polymerization process equipment is in enclosed areas and ventilation is inadequate.
- "3. Leaks from the process equipment, vessel entry, VCM tank car loading, unloading, and process sampling, PVC reactor cleaning, compounding and packaging areas are major potential sources of VCM exposure found during this survey.
- "4. Engineering technology for control of VCM exposure is available and has been implemented by industry.
- "5. The observed practices relative to equipment maintenance, monitoring, medical examinations and surveillance and training are considered to be inadequate to control the employee's exposure to VCM."

In contradiction to these conclusions, the DEIS (page 63) states: "Since the technology appears to be readily available, it can be assured that substantial development costs will not be incurred."

Even the meager data quoted on the two of seven plants visited (both obviously VCM manufacturing facilities) disclosed only one ceiling value below 1 ppm. Plant A data reported was on a Time Weighted Average basis (not recognized in the proposed standard), and all showed detectable exposure levels.

This data certainly cannot be used to support the feasibility of the proposed permanent standard. In addition, this data shows significant exposure above the present emergency standard (several readings in excess of 150 ppm).

The DEIS (page 63) mentions several possible areas of improvement which would lead to lower exposure levels. While we recognize that these suggestions may, where they are not now being effectively implemented, reduce exposure, we know of no way to reduce exposure to 1 ppm or no-detectable level. Moreover, we know of no other PVC or VC plant which is operating or can operate within the proposed permanent standard.

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In summary, there are no data in Appendix C that could logically lead to the conclusion that a ceiling of 1 ppm is feasible in work areas of existing facilities even with engineering modifications.

Therefore, we find that there is absolutely no substantial basis, either in the DEIS or in fact, for the statement on page 63:

"No evidence to date indicates that promulgation of the proposed standard will stop vinyl chloride production and use, although production in some plants could be curtailed if re-engineering is required."

To the contrary - the evidence reinforces the industry position that it cannot now, nor in the foreseeable future, comply with a work area ceiling level of 1 ppm VCM in either its VCM or PVC manufacturing facilities.

Cartridge respirators are summarily dismissed (page 56) without provision for future improvement or recognition of their effectiveness under appropriate operating conditions. There is no recognition of the personal problems involved in wearing "full face respirators", nor "whole-body air supplied suits impervious to vinyl chloride".

The statement supports the inclusion (page 58) of a specific protocol for testing, medical diagnosis and treatment for a newly identified disease for which there is no known predictive testing.

There are a number of technical inaccuracies. For example:

1. Production of vinyl chloride Table 1 page 26

Shell's testimony at the February 15, 1974 hearings is referenced as a source of their vinyl chloride monomer capacity. The reported figures of 1,200 and 1,000 millions of pounds (per year?) are actually stated in the testimony as 1200 and 1000 tons per day, respectively, for their two plants. This may explain why, on page 28, the authors were puzzled by the apparent discrepancy in the number of workers reported by PPG and Shell required -- "per million tons" -- (of what time?).

2. Production of vinyl chloride polymer and copolymer resins amongst others, page 35

"The output of bulk processing plants is said to be more than twice that of good suspension plants of comparable size". Typically, such statements are repeatedly made without specific reference in the statement. We do not believe this statement to be accurate.

On page 60, the DEIS states that "vinyl chloride, a petrochemical, is produced from irreplaceable natural resources, and reduced demand on these resources could be of merit".

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Are OSHA and other Governmental agencies cognizant that over 50% of vinyl chloride (and PVC) is derived from salt, of which the world has a super-abundance. Likewise, ten percent of the chlorine produced in the United States is used to make PVC and a reduction of caustic production would have a significant environmental impact.

In summary, in our judgment, the proposed permanent standard is not technically feasible and the DEIS provides no evidence to the contrary.

Yours very truly,

B.F.GOODRICH CHEMICAL COMPANY
a Division of The B.F.Goodrich Company

Anton Vittone
Division President

AV/ja

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ANTON VITTONI
DIVISION PRESIDENT

July 17, 1974

The Honorable Wendell Ford
Governor of the State of Kentucky
Frankfort, Kentucky

Dear Governor Ford:

As a major manufacturer of polyvinyl chloride plastics and vinyl chloride monomer in Kentucky, we of B.F. Goodrich feel you would be interested in recent developments concerning vinyl chloride and the efforts of the Federal Occupational Safety and Health Administration to promulgate a standard regulating the exposure of workers to vinyl chloride in plants.

At our Louisville plant we produce polyvinyl chloride resins and compounds, used in wire insulation, appliances, pipe, building materials and many other products. At this plant 465 workers are engaged in this production. At Calvert City, Kentucky, we produce vinyl chloride monomer, the basic raw material used to produce polyvinyl chloride resins. Approximately 400 employees are directly or indirectly engaged in this production. We have been operating plastics, rubber and chemical plants in Kentucky since 1942 and for many years Kentucky has been the state with B.F. Goodrich's second largest number of employees and largest capital investment.

I am sure you are familiar with the fact that early this year we discovered that three of our Louisville employees who had worked in PVC and related production had died from a rare form of liver cancer - angiosarcoma. Later, a review of records revealed that, in the past, two others had died. Medical examinations showed two living employees had this disease. As soon as the first cases were confirmed, we notified Dr. J. Bradford Block and the Kentucky Department of Labor, the National Institute of Safety and Health (NIOSH), our employees, and the public through news releases. These voluntary reports led to intensive investigations by state and federal government agencies, private industry, and university and private health and medical institutions.

These investigations are far from complete and much remains to be discovered and confirmed. We believe it was prudent of Kentucky to establish a 50 ppm standard which was followed by Federal OSHA in its temporary standard.

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In the current OSHA consideration of a permanent standard the acceptable level of exposure is the central question. The question is extremely complex and a great deal of testimony on this subject has been presented at the OSHA hearings. We are enclosing testimony which I presented on behalf of the Society of the Plastics Industry on June 25, testimony presented on behalf of B.F. Goodrich Chemical Company on July 8 by John L. Nelson, Vice President of Manufacturing, testimony I presented before an OSHA preliminary hearing on February 15, and before the Kentucky Department of Labor hearing on February 19, and testimony presented by Dr. Condict Moore, Professor of Surgery, University of Louisville, on July 8, which describes the medical research program now being carried out at the University of Louisville Medical School under a grant provided by B.F. Goodrich.

On the question of exposure levels, the OSHA level had been set for a number of years at 500 parts of vinyl chloride per million (ppm) in the work atmosphere. Following our discovery and announcement of the Louisville liver cancer cases, Dr. Cesare Maltoni of Bologna, Italy, testified to OSHA that in animal studies, he had observed angiosarcoma of the liver in rats at 250 ppm.

Upon the recommendation of Dr. Block, Kentucky became the first state to establish a level, without respiratory protection, of 50 ppm. Soon thereafter Federal OSHA established a temporary standard of 50 ppm.

On May 10, OSHA proposed a permanent standard of "no detectable" level of exposure. Federal OSHA must establish a permanent standard by October 5.

B.F. Goodrich has undertaken a very large program to reduce exposure to vinyl chloride, from any source, to the lowest technically feasible levels as quickly as possible. The steps we have taken are outlined in Mr. Nelson's testimony. We have been successful in substantial reductions. In addition, we have undertaken the largest research and development program in the company's history to achieve still further reductions.

We have endorsed a program of step-wise reduction from the present temporary standard. This approach, which has been followed in establishing other standards set by OSHA will provide greatly reduced exposure. While it will require all producers to take active steps to reduce exposures, it will permit them to keep operating and thus preserve some 6,500 jobs in the PVC and VCM industry.

B.F. Goodrich is committed to reduce exposure to the lowest feasible level as quickly as possible.

As you may be aware, representatives of organized labor have strongly supported the "no detectable" level proposed by OSHA. This would require workers to wear protective clothing and air fed respirators 100% of the time.

All the engineering studies and research we have done show that these approaches are not technically feasible or possible. Therefore, if the proposed permanent standard were adopted, we would have no alternative but to shut down our PVC and VCM operations in Kentucky and four other states.

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A study by Arthur D. Little, Inc. of Boston indicates that an immediate shut-down of all PVC resin plants in the United States and the subsequent unavailability of PVC resin could result in a loss of 1.7 to 2.2 million jobs in consuming and related industries.

Throughout the recent OSHA hearings, organized labor witnesses and others supporting the "no detectable" levels were asked if they had conducted any engineering feasibility studies of operation at such levels. None had. On the other hand, every VC and PVC producer which testified stated that they could not operate under the proposed standard.

Dr. Block is quoted in the Louisville Courier Journal (page A 10 July 10) to the effect that he did not think industry is bluffing. Despite non-industry testimony and assumptions to the contrary, I can assure you that we are not.

In the same article Dr. Block is quoted as suggesting levels "something like 15 (ppm), at which most companies could continue to operate." This would be an extremely difficult standard to meet by October 5, 1974.

Yours very truly,

B.F.GOODRICH CHEMICAL COMPANY
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