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THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

250 PARK AVENUE • NEW YORK, NEW YORK 10017 • 212/687-2675

MINUTES

OSHA COMMITTEE

VCM AND PVC PRODUCERS GROUP

Union League Club
New York, New York

May 21, 1974
10:00 a.m.

Present:

Harry E. Connors, Chairman, Diamond Shamrock Chemical Co., 1100 Superior Ave., Cleveland, Ohio 44114
H. D. Allick, The Goodyear Tire & Rubber Co., 5408 Baker Avenue, Niagara Falls, New York 14302
B. G. Bonner, Tenneco Inc., P. O. Box 2511, Houston, Texas 77001
William L. Cox, The Goodyear Tire & Rubber Co. D/455B, 142 Goodyear Blvd., Akron, Ohio 44316
Daniel S. Dixler, Keller & Heckman, 1150 17th Street, N. W., Washington, D. C.
R. J. Dowling, Uniroyal Chemical, Spencer Street, Naugatuck, Conn. 06770
Warren S. Ferguson, Allied Chemical Corp., Box 1057R, Morristown, N. J. 07960
J. M. Gilmore, The Goodyear Tire & Rubber Co., 5408 Baker Avenue, Niagara Falls, New York 14302
Ralph L. Harding, Jr., President, SPI, 250 Park Avenue, New York, N. Y. 10017
Jerome H. Heckman, Esq., Keller and Heckman, 1150 17th Street, N. W., Washington, D. C. 20036
Jack Jaglom, Pantasote Co. of New York, 26 Jefferson Street, Passaic, N. J.
Milton Kline, Borden Chemical - Div. of Borden, Inc., 511 Lancaster Street, Leominster, Mass. 01453
L. B. Kuhn, Stauffer Chemical Co., Westport, Connecticut 06880
Richard W. McBurney, M.D., Diamond Shamrock Chemical Corp., 1100 Superior Avenue, Cleveland, Ohio
Roy W. McCune, The Pantasote Co. of New York, 26 Jefferson Street, Passaic, N. J.
Mark Minkus, Tenneco Chemicals, Inc., Park 80 Plaza West - 1, Saddle Brook, New Jersey 07662
John L. Nelson, B. F. Goodrich Chemical Co., Oak Tree Blvd., Cleveland, Ohio
Douglas A. Rausch, Dow Chemical USA, 2020 Dow Center, Midland, Michigan 48640
F. X. Ritter, Tenneco Chemicals, Inc., P. O. Box 2, Piscataway, N. J. 08854
John T. Ronan, III, Stauffer Chemical Company, Westport, Conn. 06880
K. L. Schurter, Conoco Chemicals, Park 80 Plaza East, Saddle Brook, N. J.
David Smalley, Tenneco Chemicals, Inc., Turner Place, Box 2, Piscataway, N. J.
Arthur A. Smith, Robintech, Inc., P. O. Box 2342, Fort Worth, Texas 76101
John T. Smith, Covington & Burling, 888 16th Street, N.W., Washington, D. C.
A. B. Steele, Union Carbide Corp., 270 Park Avenue, New York, N. Y. 10017
Jerry Twomey, Uniroyal Chemical, Elm Street, Naugatuck, Conn. 06488
Thomas J. McGrath, Director of Packaging Services, SPI, 250 Park Avenue, New York, N. Y. 10017

Harry Connors called the meeting to order and asked for self-introductions. Tom McGrath read the minutes of the April 24 meeting. Following the reading, the minutes were approved with a correction on page 2, changing the word "support" to "supply" in paragraph 5 line 1.

Jerry Heckman advised that SPI will file a statement with OSHA requesting a 30 day extension for filing comments about its proposed permanent standard.

It was recommended that each member and their customers file comments about the proposed permanent standard.

Art Steel gave a summation of his review of the data regarding monomer exposure and health experience of workers in plants polymerizing vinyl chloride. (A copy of Mr. Steel's report is attached.)

Following Art Steele's report, a proposed industry position regarding vinyl chloride was submitted to the group by the representatives from Tenneco. (A copy of this working draft is attached.)

A brief discussion was held about the Chemical & Engineering News article which alleged that the industry did not come forth with information it had about angiosarcoma and VCM. It was the SPI position that since these alleged actions were attributed to MCA, it is the organization which should respond.

After discussing what the recommended industry position should be, by a vote of 7-6 it was recommended that the industry position should propose a TWA of 25 ppm with a maximum exposure of 40 ppm of VCM.

B. F. Goodrich indicated that they would propose to OSHA the following:

1)	By October 5, 1974	TWA 15 ppm	Max. 30 ppm
2)	By April 5, 1976	TWA 10 ppm	Max. 20 ppm
3)	By October 5, 1977	TWA 5 ppm	Max. 10 ppm

Some members expressed the opinion that getting the workers to wear respirators below a level of 25 ppm TWA-40 ppm MAX will become a problem.

Based on the vote, Jerry Heckman will prepare a draft statement which will be reviewed at the full committee meeting which will be held in Washington on June 5.

Jack Jaglom, Chairman of the Processors Subcommittee reported about its May 15 meeting. (A copy of his report is attached.)

Following his report, Mr. Jaglom was requested to contact Golub Associates and obtain cost estimates for monitoring a number of processors plants.

It would appear that processors who use pelletized compounds, should be eliminated from the final OSHA standard for VCM. It also appears that plastisol and solvent resin users should also be eliminated. Correlated supporting data will have to be developed to justify these assertions.

PROPOSED INDUSTRY POSITION RE VINYL CHLORIDE

PART I - OPPOSITION TO THE PROPOSED STANDARD

The undersigned producers of vinyl chloride and its polymers are opposed to the Department of Labor's proposed permanent occupational standard for vinyl chloride published in the Federal Register on May 10, 1974, requiring that employee exposure to vinyl chloride be set at "no detectable level." This opposition is based upon the following factors:

(1) The proposed standard ignores the long safety record of the industry;

(2) It is not adequately supported by any medical data;

(3) Its achievement is not feasible in view of the current technological capability of the industry;

(4) If put into effect, it will require either complete shutdown or drastic reduction of production in the vinyl chloride industry, with severe attendant consequences in numerous other sectors of the economy throughout many diverse consumer markets. Each of these reasons is discussed in more detail below.

(1) In its thirty-five year lifetime, the vinyl chloride industry has produced approximately (50) billion pounds of vinyl chloride and its polymers, and employed approximately (20,000) individuals. These are entirely exclusive of the hundreds of thousands of individuals employed in processing

industries utilizing the polymer as well as allied industries wholly dependent on the finished products therefrom. Currently, there are (14) vinyl chloride and (37) polyvinyl chloride manufacturing plants of varying ages in operation, employing approximately (6,500) workers. A current medical screening of present employees throughout the industry in the United States, and a review of past medical histories of vinyl chloride workers has revealed that a total of 12 employees, who were employed in four plants, each in operation for over 20 years, had a medical condition diagnosed as angiosarcoma of the liver. The assumption has been made from this fact that this form of liver cancer may be caused by employee exposure to vinyl chloride at levels presently found in manufacturing plants. This assumption is not valid. It overlooks the fact that in past decades, workers were exposed to much higher levels of vinyl chloride than they are today. Specifically, vinyl chloride exposure has been drastically reduced since technological advances have enabled automation of many manual operations; new facilities have better venti leaks are subject to greater controls and work practices have improved. As late as 1963, the American Conference of Governmental Industrial Hygienists (ACGIH), recommended a safety standard of 500 ppm as a maximum concentration of ambient vinyl chloride exposure, evidence that exposures at this level and above occurred during the industry's first two decades.

(2) The animal studies now underway should provide industry and government with important information as to what levels of vinyl chloride exposure are in fact dangerous to human health and present a grave and imminent hazard to the worker. While fully supporting these tests, the undersigned believe that the Department of Labor has taken a position not supported by the

data thus far available. Specifically, the Department has chosen to accept data and analysis based on experiments conducted on a specific species of mouse and disregarded contradictory results reached in similar experiments on other animals commonly used for such experiments. In addition, the Department has made extrapolations from these mouse tests to humans without adequate justification. The medical data currently available are discussed more fully in Appendix A.

(3) The proposed permanent standard assumes that members of the industry will be able to meet its requirements through a combination of engineering controls, work practice methods, and use of respirators. This assumption is not justified. Compliance with the proposed permanent standard is not feasible as a practicable matter. Because of the current configuration of industry plants, the fact that batch processing is employed and the state of technology, the practical effect of the proposed permanent standard will be to require employees to wear respirators during 100% of their time spent in the regulated work area as described in the work standard. It is highly unlikely that workers in these regulated areas would be willing to remain employed under these entirely untenable conditions. Additionally, many maintenance and other routine operating tasks cannot physically be accomplished when a respirator is worn. The practical result will be a drastic reduction in the plant production capacity and the likelihood of partial or total shutdown of operation of the facility. Additionally and importantly, a number of the plants' safety practices would have to be abrogated in the regulated work areas where total respiratory equipment is mandatory at all times.

(4) Because of the unique societal importance of PVC, the most versatile thermo plastic polymer used by industry, a serious disruption in its production will have severe economic consequences in numerous consumer and defense industries. The potential ramifications for the United States economy of serious disruption of the polyvinyl chloride industry, which are likely to result from the implementation of the proposed permanent standard, are elaborated in more detail in Appendix B.

PART II - THE INDUSTRY PROPOSAL

Though the undersigned oppose the proposed permanent standard, we recognize the necessity to set a level of exposure for employees which is below that shown potentially to be harmful to human health. Accordingly, we offer the following proposal, which will assure that the weekly exposure of individual employees is limited to amounts of ambient vinyl chloride, significantly below those at which potential for human harm has been implied from animal experiments. This proposal, which is set forth below, is significantly more stringent than the temporary emergency standard currently in force and represents a realistic and feasible approach to the problem of protecting vinyl chloride workers from unnecessary and potentially harmful amounts of exposure.

Each vinyl chloride manufacturer or polyvinyl chloride manufacturer will monitor, on a real time, or nearly simultaneous basis, the ambient level of vinyl chloride measured in parts per million (ppm) in each separately and significantly definable work area within his plant. (Technology to accomplish this task is currently available and continuous monitoring in the range of 1 ppm - 10,000 ppm will be carried out.)

The vinyl chloride exposure in each work area will be monitored and accumulated on an hourly and weekly basis. The hourly exposure will be recorded as the highest level of exposure experienced during that hour.

Based upon such work area monitoring the vinyl chloride exposure of each employee will be accumulated on an hourly and weekly basis. In this manner, a cumulative ppm exposure index for each employee will be constantly maintained (for example, under the current emergency temporary standard, a worker who experiences exposure of 50 ppm vinyl chloride, as a maximum every hour of a 40 hour week, would have a cumulative exposure index of 2,000 ppm-hours).

This area-focused monitoring system will enable industry management employee representatives and government compliance personnel to insure that each employee's exposure does not exceed set limits during the employee's work week. A total of 1,000 ppm-hours will be the maximum cumulative exposure permitted an individual in a work week without the use of a respirator. This is one-half the exposure permitted by the current

emergency temporary standard as noted above. This cumulative standard in turn, will require that an average hourly goal of not more than 25 ppm exposure level be achieved, based on a 40 hour work week. An individual will be required to wear a respirator* when and where necessary to prevent his cumulative exposure total from exceeding 1,000 ppm in any week.

In addition, use of a respirator will be required for any worker when the instantaneous exposure level is 40 ppm or higher because of the specialized nature of a task to be performed or because of sudden exposure due to accidental or irregular causes. This requirement applies whether or not the exposure above this so-called "maximum excursion level" of 40 ppm raises an individual worker's cumulative weekly exposure index above 1,000. The monitoring system herein proposed is conceptually modeled after one long in effect to insure employee safety in atomic energy facilities which incl accumulating employee exposure totals and maximum excursion limits for radioactivity, a known carcinogenic influence. It should be noted that the area-focused monitoring system proposed will register instantaneously such accidenta or irregularly high exposure levels, in contrast to personnel monitoring devices which are capable of indicating such problems only on an after-the-fact basis.

A necessary complement of this individually-centered exposure limitation procedure, is a program of medical screening. Each employee working

* This respirator must meet federal standards, i.e., supplied air respirators either in continuous flow or pressure demand or self-contained breathing apparatus (approved by the Mining Enforcement and Safety Administration or NIOSH).

with vinyl chloride will be given an extensive physical examination once a year and the results of these examinations will be made available to the National Institute of Occupational Safety and Health. Further, newly hired employees will be given a similar extensive examination in order to establish the proper base data for the course of their employment.

This proposed program limits exposure of workers not wearing protective devices to levels well below any that have yet been shown to have potential harm to humans and establish work practices of exposure vastly below those in existence in the industry prior to January 1974. Further, the levels are substantially below those used in laboratory tests with rodents. Thus, for example, in one experiment sponsored by the Manufacturing Chemists Association using mice which were exposed to 50 ppm of vinyl chloride, seven hours per day, five days a week, angiosarcoma of the liver resulted. However, these mice received an exposure of 1,750 ppm hours per week, while this proposal provides a maximum exposure of 1,000 ppm hours.

We believe that the research results to date are cause for grave concern about the safety of vinyl chloride workers. We do not think, however, that the evidence available necessitates, justifies or supports the proposed permanent standard of "no detectable level." We believe that the careful, continuous monitoring system which has been proposed, directed not only to the individual at intermittent times but also to the area in which he may continuously be present, as well as the stringent limits of the described program can provide the requisite safety intended by these procedures.

(Appendix A and B to be supplied by other subcommittees of the Ad Hoc group.)