UNION CARBIDE

INTERNAL CORRESPONDENCE

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MINING AND METALS DIVISION • P. O. BOX 579, NIAGARA FALLS, NEW YORK 14302

To (Name) Messrs. R. E. Byrne, Jr.
Division K. S. Chopra
Location R. F. X. Fusaro
J. V. Murray
J. L. Myers
W. C. Thurber
Copy to J. E. Walsh
File

Date April 11, 1975

Originating Dept. "Calidria" Asbestos

Answering letter date

Subject Dow Chemical - Toxicology

PLAINTIFF'S EXHIBIT
tabbies®
UC-618

A draft of a letter to Dow Chemical is attached for your review. We have two problems with Dow:

1. Selling them on the use of RG-244 in their Derakane resins.

2. Correcting an incorrect toxicology statement attributed to Union Carbide.

The two subjects have been combined into one letter for business reasons in the hope that we can get the toxicology statement corrected without causing a panic. In reality, the exposure levels involved are very low and the main hangup is with an inconsistency in the OSHA regulations. If we do not get the desired results, a more blunt followup may be needed.

It would be appreciated if each of you would provide suggestions and comments as appropriate. We would like to get this in the mail by April 18.

H. B. Rhodes

H. B. Rhodes

HBR:cjb
Attachment

DRAFT - HBR
4/11/75

Mr. Thomas F. Anderson
Designed Products Department
Dow Chemical, U.S.A.
Freeport, TX 77541

Dear Mr. Anderson:

This is the summary of our discussions with OSHA on medical examination requirements in accordance with your request to Mr. J. E. Walsh. As you may recall, at the SPI meeting in Washington we provided asbestos fiber count data taken during the sanding and grinding of various polyester-fiber glass objects containing small amounts of "Calidria" asbestos RG-244. The counts were made by the OSHA procedure with all particles longer than 5μ with an L/D ratio greater than 3 that could possibly be asbestos included in the count. It was also stated that we felt that most, if not all, of the fibers included probably were not free asbestos but we knew of no generally accepted analytical technique to prove this.

Although the dust counts reported were low, i.e., less than 0.4 fiber/cc, they were distinguishable from background. This left the question as to which employees in a shop that was fabricating objects from asbestos containing polyester resin would be required to have medical examinations under current OSHA regulations. It was agreed that Union Carbide would try to obtain a clarification on this matter from OSHA.

Mr. Lewis Cox, Special Assistant to the Assistant Secretary, OSHA helped arrange meetings in Washington with Mr. A. Reis, Senior Representative from the Office of Standards Development and Mr. C. McClure, Chief Compliance Officer, OSHA. Mr. W. C. Thurber, Product Manager for "Calidria" Asbestos represented Union Carbide.

Mr. Reis stated that they now expect to publish the proposed changes in the standard about mid-May. If public hearings are requested, as expected, this would move the promulgation of the final regulations to about the end of

the year. He was very careful not to provide any specifics but did say that the medical examination ambiguity had been cleared up in a way that should be satisfactory. The original NIOSH Criteria Document recommended a cutoff exposure level below which examinations are not required of one half of the allowable levels. It is our impression that something like this will be proposed for the revised regulations.

Mr. McClure stated that their definition of "exposure to asbestos" meant any exposure above the background level. On the advice of the Solicitor General's office, there is nothing they can do now to alter this. When the proposed new standards are published, he indicated he would consider putting out a guidance directive to their field people but made no firm commitment to do so.

It is clear that OSHA is aware of the drafting problem in the regulations and is moving to correct it. Unfortunately, this will take to about the end of the year. This leaves us back at the basic question of whether the asbestos fiber level in the dust generated by grinding is really distinguishable from the background level. A reliable method to distinguish and count asbestos fibers in the presence of other fibers is obviously needed. Actually, such a method will be important even when a cutoff limit is instituted since "operator judgment" is not the best way to distinguish nonasbestos fibers.

Union Carbide has done considerable work in this area and has found several promising techniques that will be described in the November 1975 issue of the ASTM Journal of Testing and Evaluation. In addition, one of our scientists, Dr. Kuldip S. Chopra is chairman of a joint task group set up recently by Subgroups 11 and 15 of ASTM Committee E4. Their objective is to study methods to characterize and count submicron particles and develop an appropriate ASTM procedures manual. Dr. Don Bauman of Dow is a member of this task group.

It appears that procedures to count asbestos fibers in resin dust may be part of a broader analytical problem of common interest. If so, it may be useful to look at the problem cooperatively. Such cooperation could take the form of a discussion of possible analytical techniques, collection of air samples at an appropriate location, and analysis of selected samples by both laboratories. Hopefully, in the next few months, we can come up with a much better definition of the true asbestos fiber counts for this operation. If this is of interest to you, please let us know.

While on the subject of toxicology, there is another important matter that needs to be covered. Very recently, we have become aware of the attached letter that appears to be in use by the Derakane technical service people. Unfortunately, it appears that more has been read into Mr. Myers talk than was intended.

As you are well aware, at this time asbestos related diseases are a very emotional and controversial subject. The attached paper, Asbestos and Health, published by the Asbestos Information Association/North America, gives a good, up-to-date summary of the concensus position of a large proportion of the scientific community working in this area.

There is substantial evidence of graded toxicological effects among different types of asbestos in the order of crocidolite, amosite, chrysotile, anthophyllite. The British Regulations recognize this in setting an allowable limit for crocidolite that is lower by a factor of 10 than that of the other types of asbestos and requiring special permission to handle this material. Chrysotile, like many industrial raw materials does present hazards at certain exposure levels and cannot be classified with the commonly recognized nuisance dusts.

It is true that any distinction as to asbestos type has generally been ignored by the public press when discussing the hazards of asbestos. Of equal importance, however, has been the tendency to extrapolate the effects of

high exposure in industrial and quasi-industrial situations that usually occurred many years ago to predict hazards to the general public today. The combination of these two factors has been an important cause of the present emotional publicity that asbestos has received.

In summary, we feel that the letter of Octover 16, 1974 is incorrect and misleading and its use should be discontinued. In its place, we will be glad to supply, for distribution to your customers, copies of the Asbestos and Health publication and/or the more complete brochure, "'Calidria' Asbestos RG-244, Health and OSHA Information, February 1, 1975," which you received in Washington. As in the past, we will also be happy to discuss the toxicology question with any of your customers which you wish to refer to us.

Very truly yours,

H. B. Rhodes
Technology Manager

HBR:cjb

TEXAS DIVISION
FREEPORT, TEXAS 77541

October 16, 1974

Resin Specialists

cc: E. T. Shallow
D. J. Najvar

THE USE OF ASBESTOS AS A THIXOTROPE IN DERAKANE® APPLICATIONS

Many of our customers have expressed concern as to whether the various regulatory agencies would continue to permit the use of asbestos as a viscosity modifier. A paper was recently presented at the Northeast Regional Conference of NACE by J. Myers, Union Carbide, dealing with the carcinogenic aspects of asbestos. Apparently there are four crystalline structures which are common to asbestos. Of the four, three are proven bad actors whereas the fourth (which they claim is the Calidria type) is much more innocuous.

Union Carbide claims they have sufficient toxicological data that places Calidria® in the nuisance dust category and distinctly separates it from emotional generalizations associated with generic asbestos. They have indicated that they will cooperate to any extent and would appreciate greatly if we would refer any requests for this type of information directly to them. A contact address is as follows:

Union Carbide Corporation
P.O. Box 579
4625 Royal Avenue
Niagara Falls, N.Y. 14302
Attn: Calidria Asbestos

Derakane Technical Service
Designed Products Dept.
Resins TS&D, B-1603

ldm

Union Carbide trial exhibit UC-618: H. B. Rhodes to R. E. Byrne, Jr. and Others Transmitting Draft Letter to Dow Ch...
ACL Doc 15854 · Page 6 of 7
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ASBESTOS AND HEALTH

Asbestos, used since antiquity, has widespread and important applications in our modern technological society. Approximately 3,000 different products containing asbestos are in daily use throughout the world. Its increased use in the 20th century has lent urgency to the need to cope with occupational health problems related to the excessive inhalation of asbestos dust.

Such problems are not unique to the asbestos industry. Many substances and materials in common use today can be detrimental to the health and safety of industrial workers under uncontrolled conditions. A vital and widely used raw material, asbestos is but one of a number of potentially harmful substances used by industry.

Basically, the known facts about asbestos-related disease can be summed up as follows:

First, asbestos-related health risks today are almost exclusively confined to the occupational setting.

Second, the effects of excessive inhalation of asbestos are both time and dose related. This means that asbestos-related diseases may develop, generally, only after the inhalation of substantial amounts of asbestos dust over a substantial period of time. Thus, there are levels of exposure that will not result in any increased risk of disease.

Third, there is presently no evidence of risk to the general public from exposure to the minute amounts of asbestos that have been found in community air.

Fourth, because of the long latent period of asbestos-related disease, the disease being found today among some long-term industry employees is not an indication of present day conditions, but is a result of conditions existing decades ago, at a time when neither the industry, government, or the medical profession knew very much about the health effects of asbestos and even less about the proper means for their control.

These facts are well recognized by the asbestos manufacturing industry, which has made substantial progress over the years in protecting those who work with asbestos and in eliminating emissions of free asbestos fiber into the community air.

Known and Suspected Occupational Risks

There are three primary diseases known to be caused or exacerbated by prolonged and heavy inhalation of asbestos fibers. They are asbestosis, bronchogenic (lung) cancer, and mesothelioma. Prolonged heavy exposure does not necessarily result in disease and death—but there is little question that risks are significantly increased.

Asbestosis

This is an occupational disease characterized by lung scarring, and is one of the lung diseases called pneumoconioses. It is the most common of the three asbestos related illnesses and is found only among those who have worked regularly and continuously with asbestos under inadequately controlled conditions. The average time span from first exposure to the first clinical signs of asbestosis is 17 years, although some cases have been reported in as few as ten years.

Asbestosis is neither malignant nor necessarily fatal. Many asbestos workers with minor cases can and do continue to work and lead normal lives without difficulties. The asbestos

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ACL Doc 15854 · Page 7 of 7 asbestosclaims.law/library/15854/7