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UNION CARBIDE

INTERNAL CORRESPONDENCE

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METALS DIVISION

P.O. BOX 579 - 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14302

To (Name) Mr. R. L. Folkman
Division UCC Metals
Location 38th Floor
New York, NY 10017

Date January 4, 1977

Originating Dept. "Calidria" Asbestos

Answering letter date

Subject Asbestos Exposure

Copy to Messrs. R. E. Byrne, Jr.
J. L. Myers
R. L. Schult
W. C. Thurber
File

Dear Bob:

This is in response to your letter of December 28, 1976 regarding the recent NIOSH statement on asbestos. It is a complex question to cover in brief and I leave it to your discretion as to whether you wish to transmit this entire letter or just the last two paragraphs to Mr. Kroft.

On October 9, 1975 OSHA published a proposed rulemaking on asbestos which recommended allowable exposure limits of 0.5 fibers/cc average and 5 fibers/cc ceiling. This recommendation was based on the hypothesis that asbestos is a carcinogen, that the only completely safe exposure to a carcinogen is no exposure at all, and that the 0.5 fiber level was the lowest level that was feasible to attain. (OSHA is constrained by statute to consider the feasibility of any standards they propose but this is not an overriding consideration when worker health may be in jeopardy.)

The NIOSH statement follows the same line of reasoning but goes even further in alleging that 0.1 fiber/cc is feasible and where it cannot be achieved asbestos should be phased out. It is important to realize that the NIOSH document is advisory and OSHA may accept or reject any part of it as they choose.

The "one-hit" or "no safe level" theory of carcinogenisis that serves as the basis for these proposals is new and very controversial. The industry position, supported by their medical consultants, is that the current 2 fibers/cc is an appropriate exposure level with a reasonable margin of safety. It had been hoped that some compromise between 0.5 and 2 could be achieved. The NIOSH position makes this more difficult. The industry is making a well organized presentation of their view, but it is impossible to guess what the final standard will be.

At the present time, our King City plant is generally meeting the 2 fiber level and, with particular attention to housekeeping, can probably achieve levels down to about 1 fiber/cc. For levels significantly below 1 fiber/cc, it would probably be necessary to move the ore pile, install additional vacuum equipment, and make wider use of respirators to achieve compliance.

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PLAINTIFF'S EXHIBIT
UC-1611

The most critical impact of a very low standard would be on our customers who manufacture asbestos-containing products and most particularly on the great diversity of ultimate users of these products. A standard 0.1 fiber/cc could force many of them to turn to alternative products.

Very truly yours,

H. B. Rhodes

H. B. Rhodes

HBR:cjb

A25018

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UNION CARBIDE

INTERNAL CORRESPONDENCE

METALS DIVISION

270 PARK AVENUE, NEW YORK, NEW YORK 10017

To (Name) Dr. H. B. Rhodes
Division Metals Division
Location Niagara Falls, N. Y.
Floor Number

Copy to

Date December 28, 1976
Originating Dept.
Floor Number
Answering letter date
Subject Asbestos Exposure

Dear Harry:

Would you please write me a couple of paragraphs which I can transmit to Mr. Kroft regarding the attached. Something on both our marketplace and our operations would be appreciated.

Thanks.

Very truly yours,

Boo

R. L. Folkman

RLF:hk

Att.

C.C. JLM
RLS
W.CT
REB

{ ← John: as you requested.
H.B.R
1/4/76

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RLF: Suggestion UCC ? 12-22-76

Drastic Cut in Asbestos Exposure Urged By Federal Agency for 250,000 Workers

By GAIL BRONSON
Staff Reporter of THE WALL STREET JOURNAL

Federal researchers are urging a drastic reduction in the occupational exposure of more than 250,000 workers to asbestos, a known carcinogen, to one-tenth of the current federal standard. Carcinogens are cancer producing or inciting agents.

In an unpublished report, the National Institute for Occupational Safety and Health recommends that worker exposure to airborne asbestos be limited to 100,000 fibers per cubic meter of air in eight hours. In addition, the researchers want peak concentrations of exposure limited to 500,000 fibers per cubic meter of air based on 15-minute sampling periods.

Current federal standards limit asbestos to two million fibers per cubic meter of air. This standard was promulgated by the Occupational Safety and Health Administration in 1972, at which time industry was given four years to comply. Plants were required to set up improved ventilation systems. In the interim period, an "emergency" exposure standard remained in force after it was set by OSHA under pressure from the AFL-CIO.

The institute recommendations in 1972 to OSHA were well below those actually carried out. "Our 1972 recommendations were designed to protect workers from asbestosis, or chronic lung disease," says Verne Rose, institute director for criteria documentation, "but not necessarily from cancer. We are now suggesting the least detectable exposure level in the workplace. The reason is that we don't know what could possibly be a safe level of exposure over the working lifetime without adverse health effects."

Lethal Quality Documented

The lethal quality of tiny asbestos fibers that lodge in the lungs is well documented. If the exposure to asbetos dust in the workplace is slashed, industries that use the material such as construction and oil refining may come under increased pressure to substitute nontoxic materials. Asbestos is used in fireproof textiles, shingle insulation, and thermal piping, among other products.

"It's not possible to establish a safe exposure level for the carcinogenic activity of asbestos," says Dr. John F. Finklea, director of the institute. "Therefore, emphasis should be placed on prohibiting the occupational use of asbestos in other than completely closed operations, and on substituting other products whenever possible."

The 1972 institute recommendations on asbestos to OSHA were based in part on the research of the British Occupational Hygiene Society, which evaluated 200 workers in an asbestos factory. Based on that work, the institute concluded that a two-million-fibers limit would prevent asbestosis.

However, when the British plant was restudied in 1972, it was found that there was a greater incidence of asbestosis than the British standard warranted. In fact, 36% of the workers exposed for 10 years to 19 years had some kind of chest abnormality, and the rate of abnormalities increased with the rate of asbestos exposure.

Other studies show an increased mortality rate from cancer among workers exposed to asbestos, says John Dement, an institute industrial hygienist. A British study published this year showed that workers exposed to asbestos from 1933 to 1950 had 1.8 times as much chance of contracting lung cancer as the expected number of cancer cases in the general population. Mr. Dement adds that British scientists found that in workers employed up to 15 years beyond 1950, during a period when industry improved its engineering controls and technology for plant environment, the excess cancer case statistics continued to show up.

"Excess of Cancer Risk"

In a South Dakota gold-mine study published this year, researchers found that the 440 workers had three times as many cases of respiratory disease as expected, based on the state mortality rates. These workers were exposed to less than 250,000 fibers per cubic meter in eight hours.

"We're saying reduce exposures (to asbestos) to a bare minimum because we can't tell you how low you have to go to eliminate a cancer risk," says Mr. Dement. "All studies have shown an excess of cancer risk at all levels of exposure to asbestos."

The reason for OSHA reevaluating the asbestos standard stems from a 1974 suit by the AFL-CIO's industrial union department against the Department of Labor complaining about several points in the 1972 exposure standard. The AFL-CIO petitioned for changes to be made in the required medical records that employers maintain on workers, and it requested that the timetable for lowering asbestos exposure limits be stepped up.

The federal court of appeals in Washington, D.C., directed OSHA to reconsider those two provisions of the standard. At that time, the enforcement agency decided the standard possibly wasn't protective enough of asbestos workers' health and it decided to repropose the entire standard, beyond the court directive, says an OSHA spokesman.

OSHA enlisted the aid of the National Institute for Occupational Safety and Health in the re-evaluation to study new research developments and explore advances in protective technology as they related to asbestos exposure. The OSHA spokesman said the agency will hold public hearings early next year on proposed revised standards before promulgating the final rule.

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Warning signs are required at the approaches to and in the work areas where there is a "potential exposure to free silica." Warning labels must be provided for all new materials, mixtures, and other products containing more than 5% free silica. A material safety data sheet is necessary for any product or material containing free silica.

Engineering controls are mandated to maintain the dust levels below the prescribed level. Exceptions are made for places where a variance has been grated, for the interim period while controls are being implemented, where levels cannot be met, for certain nonroutine operations, and emergencies. For these exceptions, various types of respirators, depending on the exposure level, are prescribed.

Employees exposed or to be exposed to free silica must receive detailed instruction on the hazards and how to handle the materials safely. The increased risk due to smoking must be described.

A series of work practices including substitution, moisture for dust suppression, ventilation, and recommended housekeeping procedures are specified. It is recommended that "sand" blasting with materials containing more than 1% silica be prohibited.

Very extensive monitoring is required for areas where workers are exposed to free silica. Complete records must be maintained for 30 years.

Sampling and analytical procedures are specified in detail. The main tool is X-ray diffraction.