UC 1a-2

cc: R. C. Weeks 4/23/75

cc: A E Dawson
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W. [illegible]
DJ

VII. E.

UNION CARBIDE

INTERNAL CORRESPONDENCE

MINING AND METALS DIVISION

P. O. BOX 579, NIAGARA FALLS, NEW YORK 14302

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Copy to W. C. Thurber
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File

Date April 16, 1975

RECEIVED
APR [illegible] 1975

Originating Dept. "Calidria" Asbestos

Answering letter date

Subject OSHA Regulations on Occupational Exposure to Crystalline Silica

The long delayed NIOSH Criteria Document to serve as the basis for the above noted regulation has been transmitted from NIOSH to OSHA. As expected, the suggested regulations follow the general pattern of the asbestos standard. A notable exception is a clear definition of a cut-off exposure level below which the regulations do not apply.

It is our understanding that the recommended allowable level is so low that it will be very difficult for a number of common industrial operations to meet it. The monitoring requirement is particularly burdensome as is the need for warning labels and Material Safety Data sheets for all products containing free silica. Undoubtedly, some of these requirements will be tempered as the recommendations pass through the rulemaking procedures but the basic pattern seems to be pretty well set. This procedure is slow and any final silica regulations are a year or more away.

The attached commentary on the highlights of the proposed regulations may be useful in dealing with customers. You should be aware that we have checked RG-144 and RG-244 and have not found any evidence of crystalline silica. The pyrogenic silicas have also been checked and their exact situation is not yet clear. We will provide you with the appropriate position as soon as it has been defined. Until that time it is strongly recommended that you make no statements on how the pyrogenic silica materials relate to the regulations and suggest that the customers using them check with their supplier.

Also, we have limited, secondhand, but probably reliable, information that almost anyone sanding a finished tape joint will be well over the limit. This may be useful to cause some reexamination of formulations that are under revision to eliminate asbestos.

If you have any questions, please let me know. A copy of the proposed regulations can be supplied if you feel you need it.

A08652

H. B. Rhodes

H. B. Rhodes

HBR:gt
Attachments

To cc: This information may be of interest to you as most asbestos evaluations also utilize silica in some form.

PLAINTIFF'S EXHIBIT UC-1584

NIOSH RECOMMENDED STANDARD -

OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA

On November 11, 1974, the National Institute for Occupational Safety and Health (NIOSH) transmitted their recommended standard for occupational exposure to crystalline silica to OSHA. OSHA will now consider these recommendations and the supporting evidence in the Criteria Document and publish a proposed standard in the Federal Register. Written and oral testimony on the proposed regulations will be received by OSHA and a final version of the regulation will then be promulgated. This procedure could easily take a year or more.

The proposed standard is intended to protect the worker from "adverse effects of silica exposure for up to a 10-hour workday, 40-hour workweek, over a working lifetime." Crystalline silica includes the common minerals, quartz, tridymite, and cristobalite, plus microcrystalline silica and also materials containing minute grams of free silica cemented together with amorphous silica. These include tripoli, flint, chalcedony, agate, onyx, and silica flour. Amorphous silica itself is not included.

An allowable limit of 50 micrograms per cubic meter for a full shift time-weighted average is recommended. This is approximately one half of the limit presently in force.

"Exposure to free silica" would be clearly defined as exposure to levels more than 25 micrograms per cubic meter. The regulations would not apply below this level.

Medical examinations, including X-rays and breathing function tests, would be required before exposure to free silica and at least every three years thereafter. Records must be kept for 30 years after termination of employment.

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

Engineering controls would be mandated to maintain the dust levels below the prescribed level. Exceptions would be made for places where a variance has been granted, 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 would be required to receive detailed instruction on the hazards and how to handle the materials safely. The increased risk due to smoking must be described.

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

Very extensive monitoring would be 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.

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