PLAINTIFF'S EXHIBIT

UC-2937

UNION CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION P. O. BOX 670, BOUND BROOK, NEW JERSEY 08805

POLYOLEFINS DIVISION

To (Name) Mr. T. P. Raby
Division
Location
Area

Date March 16, 1982

Originating Dept. SHARE Department

Area

Copy to Mr. G. H. Berry - B-71
Mr. K. E. Martin - Texas City
Mr. P. A. Schultz - B-11

Subject Asbestos Removal

Subsequent to my comments on SH-256, I received the attached from Kirk Martin. The letter from OSHA moderates the literal reading of 1910.1001 (c) (2) (iii) which would otherwise put workers in air supplied respirators when demolishing insulation containing asbestos. However, the alternative places a heavy burden of administrative control and personal monitoring requirements on the employer. It would be helpful to incorporate these requirement in SH-256.

Doug

W. D. Neal
Staff Industrial Hygienist

/rk
attachment

UCC 016232

UNION CARBIDE

INTERNAL CORRESPONDENCE

P. O. BOX 471, TEXAS CITY, TEXAS 77590

To: R. E. Cope - 500
W. D. Neal - 312
S. E. Robinson - 519
C. R. Roundtree - Bechtel

March 11, 1982

Subject: Personal Protective Equipment - Asbestos Demolition

Attached is a recent OSHA interpretation of standards associated with asbestos demolition, authored by Mr. Patrick R. Tyson, Acting Director of Federal Compliance and State Programs. I will not attempt to comment on Mr. Tyson's letter as it clearly outlines the current policy regarding the removal or demolition of asbestos.

Kirk E. Martin

KEM:ir
Attachment

UCC 016233

U.S. Department of Labor

Occupational Safety and Health Administration
Washington, D.C. 20210

Reply to the Attention of:

JAN 7 1982

John M. Hochstrasser, Ph.D.
Manager, Industrial Hygiene
Tenneco Chemicals
Park 80 Plaza West-1
Saddle Brook, New Jersey 07662

Dear Dr. Hochstrasser:

This is in response to your inquiry addressed to Mr. Bruce Hillenbrand regarding the use of type "C" supplied-air respirators to comply with 29 CFR 1910.1001 (c)(2)(iii) (spraying, demolition or removal of asbestos). Please accept my apology for the delay in our response.

OSHA has replied to similar questions in the past regarding the use of type "C" supplied-air respirators. As you know, 29 CFR 1910.1001(d)(2)(iii) states that a type "C" respirator shall be used when the ceiling or the 8-hour, time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times the permissible exposure limits.

In accordance with 29 CFR 1910.1001(c)(2)(iii), employees about to engage in the spraying of asbestos, in the removal or demolition of pipes, structures, or equipment covered or insulated with asbestos, or in the removal or demolition of asbestos insulation or coverings, shall be provided with and shall use a type "C" continuous flow or pressure-demand, supplied-air respirator regardless of the concentrations of asbestos to which they may be exposed.

However, if the employer has conclusively established the upper concentration of airborne asbestos that employees could confront during spraying, demolition or removal, and the concentration does not exceed 100 times either the 8-hour time-weighted average or ceiling limits, then any of the respirators presented in 29 CFR 1910.1001 (d)(2)(i), (ii) and (iii) that afford adequate protection at such upper concentrations of airborne asbestos may be used. In such a case, although the employer would technically be in violation of 1910.1001(c)(2)(iii), OSHA would regard it to be a de minimis violation of the standard, as provided in Section 9 of the Occupational Safety and Health Act. Therefore, no citation would be issued, no penalty would be proposed, and no corrective action would be required.

To amplify these statements, we would add that the establishment of the upper concentrations of airborne asbestos fibers may require considerable effort if there are variations from operation to operation in any factors such as the following:

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ACL Doc 17791 · Page 3 of 5 asbestosclaims.law/library/17791/3

(1) Binding material
(2) Type of asbestos (e.g. length of fibers, composition)
(3) Percentage of asbestos in the insulation
(4) Removal techniques
(5) Amount of insulation removed
(6) Engineering and work practice controls instituted to reduce employee exposures
(7) Complement of employees
(8) How well employees are trained in asbestos control procedures.

Proof that the average airborne concentration of asbestos fibers an employee will confront will not exceed 100 times the 8-hour, time-weighted average and/or ceiling concentrations must be determined by the employer by applying sound scientific or engineering principles. The most reliable method would be through measuring exposures under all of the various conditions that will be encountered, as described in 29 CFR 1910.1001(f)(2)(ii), by collecting personal samples of airborne asbestos within the affected employees' breathing zones.

The asbestos should be collected on mixed cellulose (cellulose acetate-cellulose nitrate) membrane filters that are 37 millimeters in diameter and of 0.8 micron porosity. The filters should be held in three-piece cassettes. Sampling should be performed using an open-face cassette with the filter fully exposed. That is, one end piece of the cassette (not just the small plug) must be removed when sampling. The pump drawing the air through the filter must be operated at an accurately determined flow rate in the range of 1.0 to 2.5 liters per minute, depending upon the expected airborne concentration.

A practice that possibly could reduce airborne concentrations below 100 times the permissible limits of exposure would be the application of a fine spray of "amended water" to the asbestos-containing material before and during asbestos removal operations. "Amended water" is water containing 1 ounce of a surface active detergent or wetting agent (50% polyethylene ester and 50% polyoxyethylene ether) per 5 gallons.

The employer must provide his employees with the proper respiratory protection at all times, if necessary. An employee exposure to asbestos, therefore, must be determined beforehand by using valid techniques such as those described above. In some instances the employer may have to provide supplied-air respirators (as prescribed in 29 CFR 1910.1001(c)(2)(iii))

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ACL Doc 17791 · Page 4 of 5 **asbestosclaims.law/library/17791/4**

until he has determined the exposure levels of his employees to asbestos. An employer must be able to demonstrate that he is in compliance with all provisions of the asbestos standard by providing information (i.e., sampling records) to OSHA, if requested during the course of an inspection of the employer's jobsite.

We would stress the extreme importance of complying with 29 CFR 1910.1001(f)(2)(ii) if an employer decides to provide respirators described in 29 CFR 1910.1001(d)(2)(i) or (ii) rather than a type "C" continuous flow or pressure-demand, supplied-air respirator.

Thank you for your support and your thoughtful comments. If I can be of further assistance, please do not hesitate to contact me again.

Sincerely,

Patrick R. Tyson
Acting Director, Federal Compliance
and State Programs

Enclosure

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ACL Doc 17791 · Page 5 of 5 **asbestosclaims.law/library/17791/5**