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FROM THOMAS B. BONNEY
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TO INDUSTRIAL HYGIENISTS
- PLANT PHYSICIANS
- SAFETY DIRECTORS

C. F. Scott + Wy. Barbour
recip copies -

July 1, 1972

RE: OSHA STANDARD FOR EXPOSURE TO ASBESTOS DUST

Attached is a copy of the latest amendment to Sec. 1910.93 related to asbestos dust exposures. The asbestos standard becomes effective July 7, 1972. Until then, the temporary emergency standard remains in effect. As you look over the requirements of this amendment, you will be impressed that its overall effect, regardless of intent, must be to discourage the use of asbestos and materials containing it.

We urge you to read closely the provisions of the permanent asbestos standard. To impress upon you its wide scope and the significant demands that will be made of plant personnel, highlights of the standard are given below.

Permissible Exposures. Until July 1, 1976, an employee's eight-hour, time-weighted average exposure concentration to asbestos fibers longer than five microns must not exceed five fibers per cubic centimeter of air. In addition, the employee may not be exposed to a concentration in excess of 10 such fibers per cc, regardless of the brevity of exposure. After July 1, 1976, the permissible time-weighted average concentration is reduced to two fibers per cc. The ceiling concentration will remain the same.

We point out that the equivalent concentration of two fibers per cc in terms of millions of particles per cubic foot is 0.06 mppcf. In rural areas, the normal concentration range of dust in ambient air is 0.20-0.5 mppcf. Using this comparison it is easy to see that a restriction to two fibers per cc means, for all practical purposes, no dust at all.

Engineering Controls. Engineering controls in conformance with ANSI Standards are required to keep dust exposures within permissible levels. All tools that produce dust will require local exhaust ventilation. Respirators are not a substitute and may be used only under limited circumstances.

Work Practices. Wherever possible, the asbestos-containing material shall be worked wet. Furthermore, products with asbestos cannot be removed from the containers in which they are shipped without first being wetted or enclosed or ventilated in order to prevent the generation of airborne dust. Spray application and the removal or demolition of asbestos materials will require the use of air-supplied respirators on those exposed.

Personal Protective Equipment. Respirators are permissible control devices only in emergencies or during the time it takes to institute engineering controls. In some instances, and we would anticipate them to be infrequent, OSHA may allow the use of respiratory protection if they consider that other control methods are not technically feasible. The type respirator to be used for any given application will depend upon the associated concentration of asbestos dust. Where respirators are used, a respirator program must be instituted in conformance with ANSI Z88.2-1969. The elements of this ANSI

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standard are included in the OSHA regulations, Part 1910.134, page 10590-92 of the May 29, 1971, Federal Register.

No employee will be required to wear a respirator if an examining physician determines the employee will be unable to function normally while wearing one. If necessary, such employees will be removed to another job without loss of pay.

Special clothing must be provided by the employer if the employee is exposed to asbestos concentrations in excess of 10 fibers per cc. Where the employee is exposed to time-weighted, eight-hour concentrations in excess of five fibers per cc (two fibers per cc after July, 1976) or peak concentrations in excess of 10 fibers per cc, he must be provided with a change room and two lockers. The restrictions placed on the manner in which asbestos-containing clothing must be laundered are such that it might force the employer into the laundry business.

Air Sampling and Analysis. All determinations of airborne asbestos will be made by the membrane filter method at 400-450X magnification with phase contrast illumination.

Within six months of the effective date, the employer must undertake both personal and general area sampling in those areas where asbestos fibers are released to the air. The pattern and frequency of sampling must be such that it is representative of exposures. However, the interval between samplings must be no longer than six months.

The employees or their representative shall be given the opportunity to observe the air sampling and have access to the records generated from it. Any employee receiving an excessive exposure must be so notified and told of the corrective action to be taken.

Caution Signs and Labels. Signs of specified dimensions, type size and message must be posted in specified locations where asbestos fibers may be in excess of exposure limits. Specified caution labels must be placed on all raw materials, mixtures, scrap waste and debris and other products containing asbestos.

Waste Disposal. Asbestos waste products which may produce airborne fibers under any foreseeable handling must be collected and disposed of in impermeable containers.

Medical Examination. Preplacement, annual and termination medical examinations must be given to all employees exposed to airborne concentrations of asbestos fibers. The examinations must be comprehensive and include chest x-ray and pulmonary function tests.

As you can see from the above, the asbestos standard is comprehensive. It will require a considerable amount of coordination between all management personnel and education of all employees. If any of us can be of help to you as you implement this standard, please let us know.

T. B. Bonney
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TBB:WND:RHW:mh

Attachment

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Information copies to:

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