PLAINTIFF'S EXHIBIT K-311

Produced in camera under seal by order of Judges Paul Riley and Gordon Haag, October 16, 1989, in Jamison v. A. P. Green, et al. 87-L1330

S. H. Mayer - T/26

Jon L. Konzen, M.D.

September 20, 1972

ASBESTOS-FREE KAYLO

Owens-Corning Fiberglas Corporation has for many years marketed under the trademark KAYLO, a calcium silicate asbestos containing high temperature insulation product. During the manufacturing and installation of KAYLO products, airborne concentrations of asbestos containing dust are generated. Over-exposure to airborne asbestos dust for long periods of time is known to cause a fibrosis of the lungs called Asbestosis. Often this over-exposure may not be subjectively offensive to the worker. It usually takes from 10 to 20 years for the first objective clinical sign of Asbestosis to appear. Irreversible and progressive lung scarring will therefore occur in over-exposed workers before it is apparent to the man or on medical examination. Likewise, occupational exposure to asbestos is known to be causely related to carcinoma of the lung and malignant mesothelioma of the covering or pleura of the lung.

While the airborne concentration of asbestos which will cause Asbestosis is reasonably well defined, it is not well established what level of exposure is related to lung cancer or mesothelioma development.

For these reasons, it is most desirable to reduce the airborne concentrations of asbestos if at all possible.

The best method of protection against asbestos fiber is obtained by controlling the generation of fibers by substituting a less hazardous material - in this case, fibrous glass. The second best method of control is to limit the amount of dispersion of released fibers into the work place. This is a difficult task even in fixed locations such as insulation manufacturing plants. Dispersion is controlled by engineering means such as isolation, enclosure, exhaust ventilation and dust collection. Such systems are difficult and costly to design, build and maintain. The best designed and installed systems will often provide a false sense of security if they are not rigorously maintained. Basically, you again are relying on human factors which often are difficult to control. In areas of manufacturing plants and at installation sites where engineering methods are not technically feasible, respiratory protection is mandatory. Personal respiratory protection is a poor third choice behind substitution and engineering methods to control exposure to asbestos. While respirators either of the air purifying or supplied air type

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will provide technically adequate protection under ideal circumstances they often do not provide adequate protection under actual use conditions. There are several reasons for this. They may be so uncomfortable as to be burdensome, hence workers will not wear them properly. The various types of respirators mentioned above are designed for various concentrations of exposure. If the capacity of a particular type of respiratory is exceeded it will fail to provide adequate protection. In the manufacturing plants it is not likely that concentrations of airborne asbestos will vary greatly unless an emergency occurs. However, during field application of the insulation where more workers are exposed to asbestos than in manufacturing plants, airborne concentrations of asbestos can vary widely at the same exposure site. Another reason why respiratory protection is less likely to succeed is that these devices must be properly worn and maintained. In the plant situation there is a better chance of having an effective respirator program which would include individual respirator fitting by a knowledgeable individual, instruction in usage, periodic collection - often daily - of the used device for cleaning, servicing and reissuing. In field locations, especially on construction work, properly functioning respirator programs are much less likely to be a reality.

In the field during installation of asbestos insulation, especially at commercial construction sites, permanently located engineering controls are often impractical because of the changing nature and mobility of the work. Therefore, all hand operated and power operated tools which may produce or release excessive amounts of asbestos fibers must be individually fitted with local exhaust ventilation.

In addition, work practices both in the plant and on the site of installation must be extremely stringent in order to prevent airborne concentrations of asbestos.

At fixed plant locations where airborne concentrations of asbestos fibers exceed exposure limits, change rooms are required with two sets of lockers - one for work clothes and one for street clothes. The employer must supply special clothing such as coveralls, respirators, gloves, head and foot coverings for all employees whose airborne exposure exceeds the ceiling level for asbestos.

Asbestos contaminated worker clothing must receive special handling and washing to prevent dissemination of the fiber.

In order to determine exposure levels to asbestos, it is necessary to carry out industrial hygiene monitoring at every location at least

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every six months and more frequently if it is reasonably foreseen the exposure limits will be exceeded. The samples and their analysis must be carried out by experienced personnel in order to have reliable results.

At the present time the sampling method and analytic technique is undergoing review because of variability in results among competent technical personnel.

OSHA standards require that all workers who are exposed to airborne concentrations of asbestos must receive medical examinations within 30 days of their first exposure, annually and within 30 days of termination of employment. Where employees constantly change employment but continue in an asbestos exposure, they need to be examined only once a year. The examination must include as a minimum a chest roentgenogram, a history to elicit symptomology of respiratory disease and selected pulmonary function tests. Many physicians are not equipped to carry out pulmonary function testing and do not have expertise in the diagnosis of asbestos related disease.

From the foregoing comments, it can be seen that asbestos can be safely used if stringent measures are observed. Because the protective measures are numerous and complex there are many potential opportunities for workers to be over-exposed to asbestos both during the manufacture and installation of calcium silicate insulation.

For reasons of worker health, asbestos-free KAYLO has been developed. The asbestos has been replaced with fibrous glass. To date, observation of fibrous glass exposed workers, some for as long as thirty years, has not demonstrated chronic adverse pulmonary effects from exposure to fibrous glass.

From an occupational health standpoint the new asbestos-free glass reinforced product provides a substantial improvement in the quality of the working environment as a result of the removal of asbestos from the product.

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JLK:mgm

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August 29, 1972

ASBESTOS-FREE KAYLO

Owens-Corning Fiberglas Corporation has for many years marketed under the trademark KAYLO a calcium silicate asbestos containing high temperature product. During the manufacture and installation of KAYLO products, airborne concentrations of asbestos containing dust are generated. Because asbestos is known to cause a fibrosis of the lung called asbestosis, carcinoma of the lung tissue and malignant mesothelioma of the covering or pleura of the lung extensive, stringent and costly engineering controls and medical monitoring of exposed employees has been necessary.

In areas where engineering controls were not feasible, either in the plant or at the site of application, it has been necessary to wear protective respiratory equipment. Respirators are a poor second choice for protection of the worker.

Largely for reasons of health of exposed workers, asbestos-free KAYLO has been developed. The asbestos has been replaced with fibrous glass. To date, observation of workers - some of whom have been exposed for over thirty years - has not demonstrated chronic, adverse pulmonary affects from exposure to fibrous glass. From a medical standpoint, fibrous glass is an excellent substitute for asbestos in the KAYLO product.

If you have any questions or comments concerning the above statement would you please contact me.

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