OWENS-CORNING FIBERGLAS

INTRA-COMPANY CORRESPONDENCE

To Dr. J. L. Konzen/Paul Scheuerle/ J. R. Inches

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From John Vyverberg - New York

cc: F. H. Edwards - Toledo
J. E. Murphy - "

Subject Asbestos and the General Public

As promised, attached is an article on Johns-Manville and also a position paper on "Asbestos and the General Public." You may use this for background information in helping you to handle the current complaints in and out of the Berlin plant. However, this position paper is not to be reprinted or released.

John Vyverberg

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Attach.

PLAINTIFF'S EXHIBIT K336

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Not Approved For Release

ASBESTOS AND THE GENERAL PUBLIC (Use as General Background Info)

People of virtually every nation in the world benefit from the many uses of the mineral, asbestos. Asbestos helps to build safety and durability into schools, houses, ships, aircraft and public buildings.

With the increasing use of this mineral fiber, the question has been raised as to whether asbestos, especially as dust in the air, poses any health risk to the general public. The same question is being asked about many other materials in general use in our modern society. Medical and scientific research is being conducted to find answers. For asbestos, many of the answers are already in.

Research to date shows no health risk to the general public from the various uses of asbestos. To the extent that any asbestos fibers are in the general air -- and there are literally hundreds of different animal, vegetable and mineral fibers in the dust of the air -- there is nothing to show that these are a health hazard for the public.

To see why this is so requires understanding of how and why asbestos is used, of some of the scientific research that has been conducted, and of the meaning of this research with regard specifically to those with occupational exposures and to the general public.

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MODERN USES GROW OUT OF ANCIENT KNOWLEDGE

The peculiar properties of asbestos have been fascinating people ever since the mineral was discovered more than 4,500 years ago. Although asbestos in the raw state is as dense and compact as the rock which encases it, the ore can be separated into light, silky fibers. These fibers have many uses. They can be woven into non-combustible fabrics for such things as fire curtains for theaters or protective garments for firefighters. They can be added to other materials to produce floor and ceiling tile, roofing shingles, siding, asbestos-cement pipe and many other useful products.

The earliest known use of asbestos goes back 45 centuries. Objects unearthed by archeologists in Finland indicate that it was used to hold together pieces of pottery before the clay was baked. The word asbestos is from the Greek; it means "unquenched" or "incombustible." Ancient peoples used asbestos as a shroud for kings so mourners could recover the ashes of the illustrious dead from the cinders of funeral pyres. It is referred to by the ancient historian Pliny as "linum vivum" — the funeral dress of kings.

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MINERAL PROVIDES SAFETY AND DURABILITY

In the twentieth century, asbestos has become an increasingly essential material of an expanding industrial economy. Asbestos has many vital functions in construction, transportation and industrial processes. It provides built-in protection against fire and deterioration in scores of common products in daily use. Through the years it has saved countless lives and billions of dollars in property damage by preventing or checking the spread of fires. Electrical installations are safer because of asbestos insulation. When used as packings and gaskets, asbestos promotes the efficient operation of industrial machines and pumps.

In transportation, the brakes on vehicles -- cars, trucks, buses and trains -- are dependable because asbestos is a chief component in brake linings. No other material stands up so durably under the high temperatures created by friction when brakes are applied.

OCCUPATIONAL RISKS AND STEPS TO PROTECT WORKERS

To meet the increasing demand for this invaluable fiber, a worldwide asbestos mining and processing industry came into being.

As in many other mineral and materials industries, the need developed to protect employees against occupational health hazards.

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It was found that some workers exposed to excessive asbestos dust over a period of years developed a non-malignant lung disease called asbestosis. As with many similar conditions, asbestosis is dose-and-time related -- that is, it develops only after inhalation of excessive concentrations of asbestos dust over an average period of 15 to 20 years.

Some medical studies have reported an association between asbestosis and an increased risk of a certain type of lung cancer (bronchogenic). Even though the number of lung cancer cases among asbestos workers is only a small fraction of the total employed, the industry considers the problem serious. It is the subject of considerable scientific research through statistical, clinical and pathological studies of exposed workers; through experimental studies with laboratory animals, and through studies of the physical and chemical nature of asbestos and associated minerals.

The asbestos industry has invested millions of dollars in equipment and techniques to prevent the inhalation of asbestos dust by workers in the mining and milling of asbestos and in the manufacture of asbestos-containing products. A program of education and training is conducted for asbestos fabricators and applicators to provide them a thorough understanding of potential risks and to encourage general adherence to sound industrial hygiene practices.

Studies in asbestos-using industries in England and the United States indicate that where dust control measures have been taken, the risk of lung diseases among the workers has been greatly reduced.

NO RISKS TO GENERAL PUBLIC SHOWN IN STUDIES

Because of the occupational health hazards associated with asbestos, some writers who are concerned about general air pollution have raised the question of whether there is asbestos dust in the air in quantities that might constitute a health risk to the general public.

Studies of asbestos exposure and human health have produced no evidence of any health hazard to the general public from the use of finished asbestos products. Asbestosis does not occur among the general population; it occurs only among those with long-time, heavy occupational exposures. There is no evidence that anyone has ever contracted any disease from exposure to the wearing or weathering of brake linings, floor tile, roofing, or other products containing asbestos.

Brake linings in particular were the subject of a 1968 United States Public Health Service report. Jeremiah Lynch of the National Center for Urban and Industrial Health, U. S. Public Health Service, conducted the tests. He concluded that any asbestos that might come from brake lining wear was "an

inconsequental health factor in urban air pollution." The study provided scientific evidence refuting much recent unsupported speculation that the wear of brake linings might be releasing many asbestos fibers into the air:

> "Except in all but the most extreme driving conditions, only a very small fraction of the 30 to 50% asbestos present in a brake lining escapes into the atmosphere as free fiber.....the remainder is converted into some other mineral as a result of the extreme temperatures generated at small spots on the lining surface. Thus, although urban air contains a few free fibers as a result of brake lining wear, they represent a very small proportion of the total asbestos used in the manufacture of brakes. Many sources of respirable fibers not associated with asbestos products have been identified, and the free fibers from brake lining wear appear to be an inconsequential health factor in urban air pollution."

Other medical and scientific reports show that the occupational health risks from asbestos dust exposure do not extend to the public.

In 1967 Drs. P. E. Enterling and M. A. Knedrick reported on the reduction of asbestosis among workers in asbestos fabricating industries where protective measures have been taken. They pointed out that the small amount of asbestos to which people in general may be exposed is of "little importance":

> "The question of the effects of low levels of asbestos dust exposure on disease is important. Some effects are detectable....even in the asbestos building products industry, where apparently over-all exposures are minimal.

> It seems likely, however, that these exposures are greatly in excess of those in urban communitites and if very low-level exposures of populations to asbestos dust play any part in the pathogenesis (development) of disease it must be very small indeed....Asbestos dust at levels to which general populations are exposed probably is of little importance in the etiology (causation) of disease."

SO-CALLED "ASBESTOS BODIES" NOT RELATED TO DISEASE

In the mid-1960's the question of public exposure was discussed in studies that reported finding so-called "asbestos bodies" in the autopsied lungs of city dwellers not known to have been exposed to asbestos dust. The authors of one such study, Drs. J. G. Thomson and W. M. Graves, reported that these so-called "asbestos bodies" had no relation with either the cause of death or with any history or symptoms of pulmonary disease.

They also noted that it would have taken a tremendous increase in the number of "asbestos bodies" found in the autopsied lungs to constitute even a "minimal" case of asbestosis. They said in their 1966 report:

> "It should be stressed that in spite of frequent asbestos bodies in the lung bases none of this group had pulmonary disability and all died from other causes...to convert the scanty or very scanty bodies which we have demonstrated to be present in so many urban dwellers to the frequency present in a minimal basal asbestosis would require an increase by hundredfolds and to get a more diffuse classical asbestosis with pulmonary disability the multiplying factor might well be in many millions."

In a similar study the same year, Drs. L. Anjilvel and W. M. Thurlbeck noted that there is no risk of cancer to the general population from asbestos exposure. These researchers said:

> "In our series there seemed to be no particular association between malignancy and the presence of asbestos bodies... asbestos bodies are not more common in patients with malignant disease in the autopsy populations we have studied, and thus casual exposure to asbestos is not an important cause of malignancy in the general population."

These and similar findings have raised the question of the real identity of these so-called "asbestos bodies." The term has for years been applied loosely to describe a tiny body of tissue in the lung containing a core of some inhaled particle - asbestos, talc, man-made textile fiber, or certain other common substances. The name "asbestos body" is misleading if the core substance has not been positively identified. Thus, it is not necessarily so that the finding of such "bodies" in city dwellers' lungs means that these people inhaled asbestos.

Some specialists now are insisting that these be called "ferruginous (iron-like) bodies" because the over-growth tissue contains some identifiable iron and because the cores do <u>not</u> always contain asbestos.

Dr. J. M. G. Davis, in 1967, deplored the "current furor over asbestos bodies...which recently appeared in the professional literature and was widely reported in the news media with varying degrees of sensationalism." He commented specifically:

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"...the basic assumption that asbestos-like bodies can only be produced from asbestos has proved incorrect and this casts considerable doubt on the theory that has been the chief basis of the asbestos "scare"."

MANY THINGS BESIDES ASBESTOS MAY CAUSE FIBROUS "BODIES"

Much research work is going on to develop ways of identifying the particles that may be the core of these "bodies." It has been shown that a number of substances can cause "bodies" in both humans and experimental animals. L. J. Cralley and associates in the U. S. Public Health Service have discussed the great number of substances which might produce "bodies" in human lungs. Publishing in 1968, they said:

"On the premise that the fibrous bodies observed in the lungs of persons at autopsy are all "asbestos bodies" and that coated fibrous bodies are a specific reaction to asbestos fibers, some investigators have concluded that asbestos fibers are significant air contaminants.... Respirable fibers may be mineral, vegetable or animal in origin and may come from both natural and synthetic sources. There are well over a hundred different natural minerals with some degree of fibrous structure..Respirable fibers of vegetable origin may be from both live and dead plant tissues...Animal fibrous materials include animal hair and scale, insect hair...Synthetic fibers include the newer ceramic fibers...as well as a wide range of established and emerging organic types used in textiles, fillers, containers, filaments, structural materials, etc."

Whatever their origin, the "bodies" that have been reported have not been connected with any disease, or with the cause of death, in the subjects studied. Even if some asbestos is among the variety of dusts in the general air, there is no evidence

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that it has any health significance.

SUMMARY

People throughout the world benefit from the many uses of asbestos---in schools, houses, theaters, ships, aircraft, offices and other public buildings, furnances, boilers, firefighting equipment and in a myriad of everyday products.

With the 20th century growth in the use of asbestos has come recognition of the need to cope with occupational hazards associated with excessive inhalation of asbestos dust. Much progress has been and is being made in protecting workers who handle asbestos fibers in mines, mills, factories and in some building and isulation trades.

Medical scientists studying the occupational health hazards of asbestos see no evidence that asbestos poses any risk to the general public. Asbestos dust is not present in the general air in amounts of any significance to human health.

PERSPECTIVE

It is important to view in its proper perspective the expressed concern of some writers that asbestos in the ambient air is a health risk to the general public.

Asbestos is by no means alone in having the finger pointed toward it as a possible health hazard. Literally hundreds of substances -- as common and everyday as fuel oil, charcoal broiled steaks, iron rust and egg yolks---are know or suspected of being cancer causing agents under certain experimental conditions.

The point is that nearly everything we use and create in our increasingly complex society has been suspected, by someone, of being a potential hazard.

To forego the many benefits of these products of modern technology -- simply on the basis of suspicions that are unsupported by medical evidence, would be a great and unwarranted disservice to the American public.

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