

John Vyverberg

Jon L. Konzen, M.D.

April 3, 1969

Your Memo 3/20/69
Asbestos Workers -
Action to San Fibrous
Glass in A/C Systems

PLAINTIFF'S
EXHIBIT

04920-00

The following is in reply to your questions of March 20 and the analysis of the material given by the opposition in Massachusetts and Ohio. I will outline the content of the article and then criticize it.

Dr. Seilikoff's paper discusses the occurrence of asbestosis among insulation workers exposed to asbestos and not fibrous glass exposure. The only connection between the two is that they are both fibers. It should be pointed out that asbestos is a natural fiber and is a collective term for many types of the substance. At this time data is not at all clear on just which kind of asbestos will cause cancer. The problem is also unsettled as to whether the fiber itself is at fault or whether some face material on its surface. In fibrous glass the product is relatively uniform in its basic composition. The binder material applied to its surface in wool products, is an inert substance after it is cured, and lastly the great bulk of glass fibers produced are too large to be consistently taken into the lung. This last point is one of the most important differences between asbestos, which is readily respirable, and fibrous glass which is not readily respirable. Finally, asbestos in a period of months will cause tumors in animals, whereas fibrous glass simply illicit a dust cell reaction similar to other inert dusts. Fibrous glass will produce the so-called pseudo asbestos bodies or more precisely a ferruginous body similar to those found in asbestos exposure. This has been demonstrated in animals, but to my knowledge a ferruginous body with the central core of fibrous glass has never been demonstrated in humans. (I don't doubt that they occur, but they are probably relatively infrequent, since very few fibers of glass reach the lung tissue and secondly, only a percentage of those fibers will be expected to form the ferruginous bodies.)

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John Vyverberg

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Dr. Gross has pointed out that the ferruginous body is a nonspecific reaction that has no pathological significance. Our fiber glass has always had the potential to produce these bodies as evidenced by the fact that Gardner reported them in relation to fiber glass as early as 1942 in experimental animals. The second paper, Dr. Theodos' paper, "Lung Biopsy and Diagnosis of Pneumoconiosis", simply reviews the diagnostic capabilities of a lung biopsy to diagnose a variety of possible pathological conditions. Dr. deTrevilla has well pointed out that the so-called fiber glass pneumoconiosis cited in the Theodos' paper was inaccurate from a standpoint of pathological diagnosis, since silicosis had not been ruled out and refined techniques demonstrated that glass was not present in the lesion. The documentation of the environmental exposure was nothing more than a supposition and not backed by careful environmental questioning of the patient.

The next group of articles, such as Taylor's paper, "Asbestos Workers Hit by Rare Form of Cancer", and Borden's New Yorker article, Reporter at Large, "The Magic Mineral". All of these things deal exclusively with asbestos and not fibrous glass. I have already indicated the difference between the two fibers.

When Dr. Seilikoff addressed the Asbestos Workers, he indicated that it takes upwards of 40 to 50 years to produce some types of tumors in humans when exposed to asbestos. This is true, but it doesn't necessarily take this long. There have been reported cases in less time than this and another important aspect is that cancer has been produced experimentally in animals in as short as four to six months with asbestos. No investigator has yet been able to produce cancer with fibrous glass. This coupled with the fact that there has been no demonstrable disease in workers exposed to fibrous glass. It is of interest that at the Legislative hearing in Massachusetts the fact that fibrous glass was found to be sticking out like porcupine quills was not used. This charge appears to be used only within the confines of the Union meetings. I believe that Dr. Seilikoff may have examples of some fibers of glass in lungs, but I would suspect that these fibers are simply "laying" there without any adverse tissue reaction around them. It is probably also difficult for him to locate these particles with regard to whether they are lying in the breathing tubes or if they're in the air sacs. Dr. Gross has meticulously dissected ten lungs of fibrous glass workers and has not been able to demonstrate any pathology which could be related to fibrous glass exposure. Dr. Seilikoff has been making this statement for over a year now. Therefore, if he did know a pathological entity, I strongly suspect he would have published. I think the next time the question of the porcupine quills in the lungs comes up he should be encouraged to publish his findings in the medical literature. If you notice, he is very careful not be quoted directly on this particular statement. I suspect if he were backed into a corner he would simply have to admit he has found some fibrous glass lying in the lung as I mentioned earlier.

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John Vyverberg

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I will now move over to the information presented at the Green Township Local School Board. The sources of information were Mt. Sinai Hospital School of Medicine, which was simply Dr. Seilkoff and his supposition that there might be a problem. Again in this he uses the familiar scare tactic, "well we really don't know, since enough time has not elapsed to determine if very long after exposure to fibrous glass could cause cancer development." Cancers, like most other biological systems, are subject to varying circumstances. Forty years may be an average for a tumor to show up in a human, but it is reasonable to believe that a tumor could show up in a much shorter time. Since we have had workers exposed for up to thirty years without demonstrable tumors, coupled with the fact that we cannot produce tumors in animals, we are on reasonably safe ground to say that fibrous glass is noncarcinogenic. People can cite the fact that certain species of animals do not produce cancers, while others do and the fact that materials with disease producing abilities have demonstrated these capabilities only after many years removed from the exposure can be refuted on the basis that we have learned our lesson from previous mistakes. A variety of species and techniques to look at the health aspects of fibrous glass were employed, again showing no adverse effect.

The Jefferson Medical College, Philadelphia, Penna. reference was simply Dr. Theodos' article which was mentioned earlier. The English reference, The University of Whiteknights Park, Reading, England, is simply a report indicating the ability to produce ferruginous or asbestos bodies in animals. Again, I point out Gardner in 1942 and a variety of other investigators, including Gross, have also been able to do this same thing. The Bureau of Laboratories, Department of Health, Washington, D.C., I assume is where Dr. Schnepers is now located. Dr. Schnepers wrote articles in 1955 and again in 1957 on the health aspects of inhaled fibrous glass. His studies did not have adequate controls and what he was describing could well have been changes found in rats who were exposed to no substance other than room air. His studies have little validity. His 1957 study was with regard to fiber glass reinforced plastics which are not applicable to wool products.

With regard to inviting Dr. Wright to meet with top management in our company and propose additional research, I do not feel this is necessary at this time. My reasons for this are:

- (1.) We have adequate laboratory, clinical, epidemiological and environmental investigation which is either completed or well underway at this time.

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John Fyverberg

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2. This research is being carried out by extremely competent research personnel, including representatives of the Federal Government.
3. Any such research would take an additional several years and would give our opponents additional fuel to say we really don't know whether it will cause serious disease.

4. It is extremely difficult to find a population with high exposure to fibrous glass with the exclusion of other materials, such as asbestos. We are already examining the only known such group in the epidemiologic study carried out through NIA by the Public Health Service.

Jon L. Konzen, M.D.

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