

CC: Mr. Boeschenstein

PLAINTIFF'S
EXHIBIT
WV-01160

Toledo, Ohio,
April 22, 1939

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4481.D

M E M O R A N D U M

RE: HEALTH PROGRAM

On the morning of Thursday, April 20, 1939, I arrived in Columbus, Ohio, to meet with Messrs. Hirth and Hazard and Dr. Gardner. These gentlemen had met the afternoon before and had spent the evening together.

We drove to Newark, Ohio, and there introduced Dr. Gardner to Mr. Zimmerman, Mr. Boyd, Mr. O'Neill and others. Mr. O'Neill took our party around the Laboratory and Plant and we saw all the operations including the Chemical Laboratory, the Machine Shop, the Curly Wool Room (not in operation), the Batch House, the filter operation (not in operation), the metal mesh operation, the tuft wool operation, the P-F Machine (not in operation), the Club Rooms, the marble, staple, continuous, twisting and weaving operations, and finally the pipe covering and asphalt expansion joint operations.

We witnessed both the charging and forming ends of the furnaces and explained to Dr. Gardner how the fibers are made, and in a general way their dimensions and some of their chemical and physical characteristics. Dr. Gardner was most impressed with the cleanliness of the Batch House, and in general with the cleanliness and lack of dust in all our operations, especially the tuft wool machine which Mr. Hazard informed him was our dustiest operation. Dr. Gardner from time to time would rub his fingers upon an undusted sur-

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face to see the quality and quantity of dust accumulated.

In only one operation - and that is the asphalt expansion joint machine - were any of the workers taking any precautions, and here Dr. Gardner noted the workers had tied towels around the backs of their necks.

At lunch, Mr. Hirth emphasized to Dr. Gardner the practical importance of any health hazard and that it would immediately be seized upon by our competitors to our great disadvantage, unless we had convincing proof to refute it.

We then explained to Dr. Gardner our Health Program, including physical examinations and the taking of X-ray pictures. Mr. Hirth then asked Dr. Gardner for any criticisms he had to offer and his opinion as to the possibility of a health hazard, and what he would recommend in the way of gathering proof.

Dr. Gardner brought out that several years ago when he made his original tests he and people generally were thoroughly convinced that there was no health hazard in glass wool. Since that time, however, - mostly of late - he has noted a gradual trend indicating a serious doubt as to whether the substance is or is not harmful. His own opinion is still that the material is harmless, but without inhalation tests his opinion lacks definite proof.

In recent tests Dr. Gardner has noted an unusual reaction in connection with asbestos, which he theorizes is a mechanical action of the fiber, and accordingly is wondering whether glass fiber has a similar reaction.

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To secure definite proof, Dr. Gardner thought that we should have accelerated inhalation tests on animals. A negative result here would be of great value - and if the tests showed up positively we would then have an early opportunity to study suitable precautionary measures.

Dr. Gardner stated that to supplement this an autopsy on some one who had been exposed to FIBERGLAS for a number of years would be of great assistance to him in his studies. This could be arranged with Dr. Campbell.

With such a procedure, we would be attacking the problem from all angles and at the conclusion of the tests should know quite definitely whether or not there is a hazard.

Dr. Gardner also thought that he could study the problem in connection with particle sizes. That is, it may be that those FIBERGLAS particles which are capable of floating in the air are not the size of particles which can pass into the lungs. Dr. Gardner thought such tests could be made fairly simply in his Laboratory. Attention was also called to the great differences in solubilities among our various glasses and the general fact that our glasses are becoming more and more resistant to solution. It was Dr. Gardner's thought that this may account for the rapid death of those guinea pigs which had glass wool inserted in their peritonea. This reaction was similar to that experienced with sodium silicate.

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Dr. Gardner then stated that he had one animal house free at the present moment which he had been holding open against his will for another company and would much prefer working on our problem, if we so decided. The cost of the same will be the established rate of \$5000.00. It will be necessary, however, to notify Dr. Gardner within three days or so in order to engage the animal house. If the other company secures the animal house we will have to wait an indefinite time for another. We said we would let Dr. Gardner know as soon as possible.

CAREL G. STAELEN

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