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DOCUMENT DESCRIPTION: Letter to Mr. Paul M. Giever from the Public Relations Manager

bcc : Mr. E. N. Still - Seattle
Mr. J. A. Tallman - Portland
Messrs. J. R. McCord/W. W. Kuenn
Mr. E. N. Hilliard

June 2, 1948

Mr. Paul M. Giever
Industrial Hygiene Engineer
Oregon Industrial Accident Commission
1022 S. W. 11th Street
Portland 5, Oregon

Dear Mr. Giever:

At the suggestion of Mr. J. A. Tallman of our Portland office and of Mr. E. N. Still of our Seattle office, I am glad to write you about the psychological effects of exposure to Fiberglas materials.

I understand that Mr. Tallman has supplied you with copies of literature on this subject, and even though this letter may reiterate some of the points he has already established with you, it is my hope that it will supply you with useful information. I understand that you are currently interested in the subject because Fiberglas insulating wool has recently been specified for use in insulating water heaters manufactured by the Fowler Manufacturing Company in Portland.

For many years we have documented our files very carefully on the effects of exposure to Fiberglas materials in their many different forms. Indeed, in the middle thirties, before the materials were sold commercially in any volume, our parent companies undertook extensive scientific investigations to determine whether exposure to glass in fibrous form introduced any new or unusual hazard. I think you will agree, Mr. Giever, that such investigations were indicated for sound business reasons, first because we could not subject our own production employees to an unknown hazard, if any, and second because we could not subject ourselves to an unknown liability.

In the early thirties, therefore, while Fiberglas insulating wool was being manufactured by a division of the Owens-Illinois Glass Company, we went to Dr. Leroy E. Gardner of the Trueman Foundation, Saranac Lake, New York, and asked him to conduct whatever investigations he deemed necessary to find out whether there was any possibility of lung pathology or damage to the respiratory tract that might result from exposure to glass in fibrous form. Over a period of seven years, Dr. Gardner conducted a series of three investigations: ingestion, injection, and inhalation tests. Finally, in his 1941 annual report as director of the Trueman Foundation, Dr. Gardner reported:

"Exposure to dust of glass wool, a material used commonly to insulate buildings, involves no hazard for the lungs because this fibrous material is not inhalable."

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It was on the basis of Dr. Gardner's findings that we discontinued late in 1941 our program of making chest X-rays at six-month intervals of our several thousand production employees who were constantly exposed to the material in manufacturing operations. With the exception of a few score batch house employees handling sand, where, of course, there is exposure to free silica, none of our production employees wears a respirator. On the basis of Dr. Gardner's findings, we know that there is no silicosis hazard or other lung hazard attendant upon exposure to fibrous glass. There is, of course, no free silica in glass. The batch house workers, therefore, are the only ones who wear respirators and the only ones who are given chest X-rays at periodic intervals.

Meanwhile, over the years, Fiberglas has become widely established and is handled by thousands of production workers daily in the scores of equipment and appliance manufacturing establishments that use it to insulate such things as refrigerators, ranges, water heaters, roasters, etc. Many millions of man-hours of exposure have accumulated without any record of compensable disability attributed to such exposure. Other leading manufacturers of water heaters, for example, now employing Fiberglas to insulate their appliances are such industrial leaders as Rheem, Ruud, A. O. Smith, Mission Water Heaters, Frigidaire, Westinghouse, G. E., Hot Point, etc. Range manufacturers using Fiberglas T-W-P insulating wool, of exactly the same kind being used at Fowler, include such industrial leaders as Roper, McRibben & Sexton, Caloric, A-D Stove, Newark Stove (Kenmore ranges), etc.

Thus, to the scientific data developed by Dr. Gardner has been added the empirical evidence of successful use of these materials over a long period of time not only in our own plants but on the assembly lines of scores of other manufacturers.

Fiberglas thermal insulations are a form of mineral wool. As is sometimes the case in handling such other forms of mineral wool, workers handling Fiberglas thermal insulation materials initially experience discomfort to the skin of the hands and wrists. The experience in our own plants and in the plants of the vast majority of other plants using these materials is that this discomfort is not continuing as the workers become accustomed to the material. Our attitude always has been that workers handling a new material have a right to ask questions about it, with reference to how it might affect their health. Because it is impossible for us to talk to all these workers individually, we have prepared materials to be placed in the hands of industrial hygienists, safety engineers, plant physicians, production supervisors that would be useful in answering such questions. Attached are letters that have been widely distributed to job induction supervisors and industrial physicians in plants where these materials are handled. I am sure that these will be worth your careful attention, and if you wish additional copies, we will be glad to supply them.

Just as we carefully investigated the problem of possible hazard to the lungs and respiratory tract, we have tried carefully to investigate the question of

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skin irritation. At Dr. Gardner's suggestion, in 1941, we went to Dr. Marion B. Sulsberger, nationally-known New York dermatologist, who conducted a clinical investigation, the results of which are reported in the attached reprint of an article from INDUSTRIAL MEDICINE. Using human volunteers, Dr. Sulsberger

and his assistants employed six materials: Fiberglas T-7 thermal insulating wool (of exactly the same type used at Fowler), Fiberglas PF insulating wool (of the type used to insulate refrigerators), a rock wool that he obtained on the open market, tape woven of Fiberglas continuous filament yarns, tape woven of Fiberglas staple fiber yarns, and absorbent cotton (which he used as a control). These materials were rubbed on sites on the flexor surfaces of the arms over periods ranging from seven to nineteen days. Each site was rubbed daily, except Sunday, for two minutes. Significant of Dr. Sulsberger's findings are the following:

"...the histologic changes in all sites, including the sites rubbed with absorbent cotton, were of approximately the same type....All of the reactions observed were of a transitory and superficial nature....No definite sensitization to any of the materials could be demonstrated...."

An important investigation was made during 1941 by Dr. Walter J. Siebert, St. Louis pathologist, acting in behalf of the St. Louis local of the Asbestos Workers' Union. Dr. Siebert's findings are reported in the attached reprint of his article that appeared in INDUSTRIAL MEDICINE.

On the basis of these scientific investigations and on the basis of experience in our own plants and in customers' plants, we make the following recommendations for handling Fiberglas thermal insulating materials:

1. Keep work spaces as tidy as possible, disposing of trim and other scrap in receptacles provided for waste.
2. Wash well with mild soap and water before meals and at the end of each shift.
3. Wear clothing that is loose at the neck, wrists, and ankles.
4. Apply calamine lotion containing one per cent phenol to skin surfaces, if you are bothered. Available at most First Aid stations or any drug store; this lotion will help relieve discomfort.
5. Use a cleanser containing a wetting agent for removing fibers that cling to the skin.

These recommendations are essentially the same as those made in the attached letter addressed to plant physicians. They are to be found also in the attached reprint of a paper on "Safe Handling of Fiberglas in Shipbuilding" which I delivered before the Marine Section of the National Safety Congress in Chicago in 1944.

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In addition, you may be interested in knowing that we have followed with careful attention the use of Fiberglas materials in medicine and surgery. The Tower Company, Inc. in Seattle is using Fiberglas continuous filament yarns in a knitted fracture bandage, known as Aire-Cast, to replace Plaster of Paris casts in reducing bone fractures. This use is described in the attached reprint of an article by Dr. Anderson and Mr. Erickson that appeared in the AMERICAN JOURNAL OF SURGERY. Fiberglas continuous filament yarns have been used experimentally as surgical sutures. This use is described in the attached reprint of an article by Dr. Scholz and Dr. Mountjoy that appeared in the AMERICAN JOURNAL OF SURGERY. Cloth woven of Fiberglas yarns has been used in direct contact with the body in a bandage specially devised to collect the exudate from surface burns. This use is described in the attached reprint of an article by Dr. Hirsinfeld et al. Fiberglas superfine batts are used to fill pillows. Such pillows, manufactured by the L. Buchanan Company (Brooklyn), by the Glasdown Corporation (Wilkes-Barre, Pennsylvania), and the P. R. Mitchell Company (Cincinnati), have been listed as non-allergenic by the Council on Physical Medicine of the American Medical Association, and are used for the relief of individuals who are allergic to feathers or other organic materials used to fill pillows. Attached are photostats of reports, listing such pillows as accepted devices, from the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Fiberglas radio opaque yarns have been used as tracer threads in surgical sponges. This application is described in the attached reprint of an article by Dr. Lewison that appeared in the BULLETIN OF THE AMERICAN COLLEGE OF SURGEONS. Fiberglas yarns have been used by dentists to fill root canals in human teeth. This application is described in the attached reprint of an article by Dr. Maeth that appeared in the DENTAL DIGEST. Although most of these medical uses are not significant commercially, the articles describing them in medical literature point to the fact that Fiberglas materials are non-allergenic, non-sensitizing, inorganic, non-toxic, non-absorbent, resilient.

I understand that Mr. Tallman has discussed with Mr. R. J. Nowrey the possibility of including some information regarding the health aspects of Fiberglas materials in "Safer Oregon". It occurs to me that the material in the letter addressed to plant physicians or the letter addressed to job induction supervisors would be suitable, and if you concur, I shall appreciate it if you would pass this along to him for such use.

Several other materials not specifically referred to in the text of this letter are included in the attached envelope to complete your files. I hope this information will be useful to you and that a course satisfactory to everyone concerned can be worked out.

Yours very truly,

Public Relations Manager

Edward C. Ames/dog

P. S. An extra copy of this letter is enclosed with an extra set of the attachments, if you should wish to pass it along to Mr. Nowrey.

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Enclosures:

Attached to letter:

Gardner Reprint
Letter to Plant Physician
Letter to Job Induction Supervisor
Gulzberger Reprint
Ciebert Reprint
Ames Reprint
Anderson-Erickson Reprint
Scholz-Mountjoy Reprint
Hirshfeld Reprint
Photostats of Buchanan, Glasdown pillow acceptances
Lewison Reprint
Maeth Reprint

In attached envelope:

Health Aspects of Fiberglas Materials
Pioneering Uses of Fiberglas Materials in Medicine
W. G. Hazard Transcript
Figley Reprint
Bulard-Buchlup Memo
McMahon-Darby Reprint
Photostat of Buck article
Reprints of recent advertisements in medical series
Bibliography
Many Forms for Many Uses