

FRICTION MATERIALS STANDARDS INSTITUTE, INC., EAST 210 ROUTE 4, PARAMUS, NJ 07652

September 8, 1982

To: Health and Environmental Affairs Committee

Subject: Draft Report of the study "Investigation of Health Hazards
in Brake Lining Repair and Maintenance Workers Occupation-
ally Exposed to Asbestos"

On July 19, 1982, the Institute sent Members of this Committee a copy of a draft report on the above study, sponsored by NIOSH. The work is that done by Dr. Nicholson of Mount Sinai under contract for NIOSH. In my earlier notice, I advised that the AIA planned to comment to NIOSH on this work.

Mr. Pigg, at AIA, has sent along a copy of his Association's comments to NIOSH. A copy is enclosed.

E. W. Drislane
Executive Director

EWD/e

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ASBESTOS INFORMATION ASSOCIATION

1745 Jefferson Davis Highway, Crystal Square 4, Suite 509
Arlington, Virginia 22202 • (703) 979-1150

September 1, 1982

MEMORANDUM FOR:

Ms. Grisham, Nuturn Corporation
Messrs. Barton, Reddaway Manufacturing, Inc.
Goldfarb, U.S. Automotive Mfg., Inc.
Marsh, Raymark, Inc.
Miller, Prudential Supply Corp.
Riopelle, Bendix Corporation
Shaines, P.T. Brake Lining Co., Inc.
Smith, Brake Supply Co., Inc.
Sydor, National Friction Products

SUBJECT:

AIA/NA comments on final draft of report to
NIOSH entitled "Investigation of Health
Hazards in Brake Lining Repair and Maintenance
Workers Occupationally Exposed to Asbestos"
by William J. Nicholson, Ph.D., Mount Sinai
School of Medicine, New York City.

Your attention is invited to the enclosed copy of this Association's
comments on the final draft of Dr. Nicholson's NIOSH-sponsored study.
According to NIOSH personnel, there are currently no plans to pub-
lish the study.

A copy of the final draft report is available from this office on
request.


B. J. Pigg
Executive Director

BJP/dh

Enclosure

cc: E.W. Drislane, FMSI
James F. Reis, Johns-Manville Corp.
James R. Weber, Bendix Corp.
Hans Weill, M.D.

FMSI 02679



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September 1, 1982

Sanford Leffingwell, M.D.
NIOSH
R.A. Taft Laboratories
Mail Stop F-5
4676 Columbia Parkway
Cincinnati, OH 45226

Dear Dr. Leffingwell:

I am writing you on behalf of the Asbestos Information Association/ North America (AIA/NA), a non-profit organization whose member companies are engaged in the mining, milling, manufacturing, and marketing of asbestos and asbestos containing products, to comment on the final draft report of the study, "Investigation of Health Hazards in Brake Lining Repair and Maintenance Workers Occupationally Exposed to Asbestos."

The overall conclusion of AIA/NA is that the draft represents an unfocused and inconclusive study with numerous inconsistencies. Even with the caveat that it is subject to revision, the present draft does not show promise of ever becoming an adequate study of the possible effects of asbestos upon occupationally exposed brake lining repair and maintenance workers.

Perhaps the single greatest problem of the draft is with the study population, both in terms of how it is presented and with the small number of participants in relevant categories free of confounding factors. The study begins straightforwardly enough by identifying two groups to be examined, one of exposed brake maintenance repair workers, and a control group with "similar employment circumstances but without brake maintenance work." However, we are soon told that due to the confounding factor of asbestos exposure in other circumstances and the low participation in the control group, one additional group, UAW 595, would be added to the study population.

The result of these initial problems with the study population is a confusion as to what is being compared to what, which group constitutes the exposed and which group constitutes the control population, and what is the total number of the study population as well as the exposed and control groups in it.

Neither the tables nor the text of the study serve to dispell this confusion, but rather add to it. From Table 1, for example, it appears that there are 909 participants in the study, of whom 692 are in the exposed group and 217 are in the control group. Later, from Table 5 we learn that there are 123 participants from UAW 595, added earlier

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to supplement the control group. This addition brings the number in the control group to 340, for a total study population of 1032, yet the total number of participants listed in Table 5 is 1034.

The makeup of the study population is further obscured by errors in addition and by the inclusion of participants from outside the five identified union groups. Page 8, for instance, speaks of "916 individuals from the four groups listed above." This figure obviously carries over arithmetical errors found in Table 1. Again, on Table 6, we learn for the first time of 5 individuals of unknown union affiliation for whom readable X-rays were available, for a total of 983 readable X-rays, given on page 18. While such discrepancies are small, and may be accounted for in a final revision, they may have been avoided in a more preliminary stage had the presentation of this basic data been presented in a more straightforward and better organized manner. The study, after all, has been worked on for nearly five years.

Such a less convoluted presentation, however, would have disclosed the inadequacy of the chosen study population for the purposes of the study. This inadequacy is reflected in the summary points of the study, of which only 2 out of 8 (numbers 1 and 4) deal directly with brake maintenance workers. The remaining 6 summary points appear to be beyond the intended scope of the study and are indicative of its unfocused nature.

Summary points 1 and 4 themselves appear to be contradictory and expressed in a misleading fashion. On page 8, the study states: "The two most important parameters for the assessment of health effects from asbestos exposure are the manifestation of small irregular opacities on an interpretable X-ray and restrictive pulmonary function deficits." Summary point 1 concludes, in part, "A greater prevalence of X-ray abnormalities is found among garage mechanics who repaired brakes than among blue collar controls or garage workers who do not engage in brake or auto body work." Summary point 4 reads, "The pulmonary function parameters of garage mechanics engaged in brake work are no different from non-garage workers and other general population controls." There thus appears to be no agreement between the two parameters for the assessment of health effects from asbestos in this study.

However, closer inspection of the data underlying points 1 and 4 leaves even these conclusions open to question. Tables 17a and 17b appear to be the basis for summary point 1. These two tables give the percentage of X-ray abnormalities according to years of garage work and years since onset of garage work, respectively. They also are the only two tables which deal specifically with the population which properly should be the subject of this study, those individuals employed in garage work analysed as two groups, with one group engaged in brake work and another doing no brake work. The total percentages for both tables are identical, 23% for the brake work group and 21.2% for the no brake work group. While a greater percentage is exhibited by the brake work group than the no brake work group, the difference between them can hardly be considered significant. Perhaps in recognition of this, summary point 1 goes on to attribute significant differences in percentages in the categories of those

with 30 or more years of employment compared to workers of lesser service. Yet this conclusion must take into account the small number of individuals involved, particularly among the control no brake work group in the categories of more than 30 and more than 40 years employment. These figures are 12 individuals with more than 30 years employment and 3 individuals with more than 40 years employment. It would be difficult to attach any valid significance where such small numbers are involved.

Similarly, with regard to summary point 4, involving pulmonary function parameters, the problem with the selection of the study population is again a factor. While members of UAW 595 were included in the X-ray portion of the study, they were not included in the pulmonary function testing. The result is that between the X-ray and the pulmonary function data we are dealing with 2 differing study populations, which further confounds any conclusions which may be drawn.

Despite these substantial inadequacies, the study is permeated throughout with a tone which attempts to attach some significance to the possible health effects which may be associated with the low levels of asbestos exposure in brake maintenance work. Although referring several times to "significant asbestos exposures" during such work, the study makes no attempt to quantify such exposures, again limiting any possible utility of the study.

It is unfortunate that considerable government funds were expended in the compilation of such a seriously flawed study as represented by the final draft report. Furthermore, it is difficult to see how, with the existing data, it can be reformed into a scientifically acceptable document. Nonetheless, should this be attempted, AIA/NA requests an opportunity for further comment, as we have dealt here only with the study's most obvious faults.

Please know that this Association appreciates the opportunity to receive and comment on this study.

Sincerely,


B. J. Pigg
Executive Director

BJP/dh