FILE NAME: Talc (TALC)

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April 1, 1952

Mr. Allan L. Coleman
Chief Industrial Hygienist
Department of Health
State of Connecticut
Hartford 1, Connecticut

Dear Mr. Coleman:

A few minutes ago I sent off a telegram to let you know that my reply to your letter of January 21 will be in today's mail, via special delivery. I sincerely regret the delay in sending our comments to you, but it has been unavoidable.

Unfortunately, I cannot be in Cincinnati on Saturday, April 19, and I am wondering whether Mr. E. C. J. Urban, an Associate Member of A.C.G.I.H. and a member of my staff, cannot act as my alternate. If this is agreeable to you, Mr. Urban will plan to come to Cincinnati in time to attend the meeting.

Sincerely yours,

Arthur J. Vorwald, M.D.
Director

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CRMC-HT-TALC-000200

These comments, we know, serve only to emphasize the existence of obious obvious discrepancies and in no way aids in their remedy.

With regard to dusts, the problem of setting a maximum allowable limit for asbestos is one to which considerable thought has been given by various investigators. From experiments conducted at The Saranac Laboratory it has been shown that only asbestos fibers longer than about 20 microns are capable of causing peribronchiolar fibrosis typical of asbestosis in guinea pigs, rats, and rabbits. The corresponding value for industrial workers is still a question but it is probably not less than 20 microns. The upper limit is similarly indefinite. From animal observations, the actual concentration of these long asbestos fibers which must be considered hazardous is quite low, possibly even less than one (1) million particles per cubic foot of air. However, in an atmospheric suspension of asbestos dust, even a suspension arising from long-fiber asbestos, the number of fibers longer than 20 microns is generally only a small part of the total number. It would be logical to fix a threshold limit for asbestos dust on a sliding scale which would be regulated by the proportion of long fibers in the dust. We are probably not justified in adopting such an arrangement at present because the range in the length of fibers hazardous to industrial workers is not known, and because the determination of the size frequency for each dust sample would be a burdensome task.

Some clarification of this problem, however, is essential. For this reason we suggest the following modification for consideration.

Tentative Standardfor Asbestos
Total count including fibers longer than 10μ — 5 m.p. per bubic foot.

Exception: The concentration of long fibers (> 10μ) shall not exceed 1 mp per cubic foot.

In reference to silica dusts, proper terminology should be considered at this time. A distinction should be made between crystalline free silica and amorphous silica forms. Diatomaceous earth and chemically prepared amorphous silica fumes are becoming industrially prominent. These silicas may be hazardous and produce specific disease unlike classical silicosis.

We note that the same limit for talc and for soapstone (20 m.p. per cubic foot) is used by most states. Three, however, have a threshold of 50 million particles for soapstone. Since soapstone is an impure form of talc and since commercial varieties of either talc or soapstone may contain an appreciable amount of quartz, it would appear that the threshold limit for the two materials should not differ greatly.

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Further, under Mineral Dusts, three separate categories appear, each of which essentially mean the same thing.

1.	Dust (Nuisance, no free silica)	50 m.p. per cubic foot
2.	Silica Low (below 5% free SiO_2)	50 " " " "
3.	Total Dust (below 5% free SiO_2)	50 " " " "

We wonder whether 1. and 2. cannot be combined or if all categories could not be covered by one statement.

With respect to beryllium we hesitate, in view of our present knowledge, to set any specific value for a threshold limit. If forced to set a limit at this time the value would obviously be close to zero. This view arises from experience with so-called neighborhood cases in whom the presence of the disease has been verified.

In the interest of talc, the value for the threshold limit is still debatable because controlled experimental and clinical studies have not defined the amount of talc dust necessary to produce pulmonary disease. For the present, therefore, a value of 20 million might be continued as a working standard for talc dust.

Your request for the preparation of an "Annotated Bibliography on Asbestos, Beryllium, Free Silica and Talc" requires further clarification. We would be glad to help in this project in any way that we can but a compilation of this sort would necessitate considerable work.

With best regards,

Sincerely yours,

Arthur J. Vorwald, M.D.
Director, The Trudeau Foundation
and The Saranac Laboratory

AJV:jc

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