

M E M O R A N D U M

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Subject: Visit of Dr. C. S. Thompson to Niagara Falls, NY, October 10, 1974

Dr. Thompson paid an informal visit to our laboratories last week. We discussed in detail the current talc industry (primarily R. T. Vanderbilt) discussions with OSHA and the application of the OSHA fiber counting procedures to talc dust samples. The status of the forthcoming silica regulations was also covered. The main points covered are reported here.

Status of Silica Regulations

At long last the NIOSH criteria document is about ready to be transmitted to OSHA. You are all aware that the Asbestos Document had a very strong antiasbestos bias with negative evidence highlighted and positive evidence dismissed as inconsequential. It drew a tremendous amount of flak as a consequence. A silica document written shortly afterward with the same sort of bias bounced badly and is just now coming out. According to Dr. Thompson, the asbestos incident plus a change in personnel has produced a much more scientific study of silica.

The key points of concern to us are:

1. Amorphous silica is not included in this Criteria Document.
2. Both X-ray and I-R criteria for crystallinity are included. The I-R is much more sensitive. When this is clarified, we need to check out the competing silica products.

Exemption of Talc from Asbestos Regulations

The exemption at present is not as clearly defined as would appear from the report in the AIA/NA "News and Notes" of September 30, 1974. The exemption letter was watered down considerably as it went through channels. They are optimistic that a more precise clarification can be obtained.

Talc Minerology and Dust Counting

We encounter occasionally the situation where talc and asbestos are dumped at about the same time. These tend to give very high counts which seldom contain much chrysotile. Dr. Thompson's guidance on the various "fibers" present was sought.

The key point is the definition of what is a fiber. Dr. Thompson is a firm believer in the following criteria:

1. Extreme L/D ratio.
2. Flexibility.
3. Parentage, i.e., it must have crystallized in nature as a fiber. Fragments of crystals formed by breakage along two good cleavage planes are not fibers.

If you accept this definition, the problem becomes much simpler. Unfortunately, there is 180° disagreement within OSHA on the matter. Dr. Thompson described a recent meeting with a senior enforcement official and Mr. Harry Gilbert, the draftsman for the present and revised OSHA regulations. They were looking at pictures of tremolitic talc that was full of the typical needles and other long, narrow cleavage particles. The enforcement official took the position that there were no "fibers" and that their people who count would not report the particles he was looking at as asbestos. Harry Gilbert took the position that the law said these particles were asbestos fibers and that they had to be counted. This defined the problem but did not provide the solution unless the OSHA position can be clarified along the lines of the talc industry position.

There are some far reaching political consequences of this argument since essentially all of the amphibole involved in the Lake Superior controversy are not "fibers" but are cleavage chips. The writer and Ed Kleber concluded that we are on reasonable grounds to report our dust count results in terms of "probable chrysotile fiber" and other particles (nonchrysotile) with L/D ratio greater than 3.

For our guidance the following principal industrial (nondrug) talcs were described:

1. International Fiber (now owned by RTV), Tremolitic.

A substantial amount of some of their deposits contain a true fibrous talc. This is a recent discovery which RTV expects to exploit. This fibrous talc is not covered by the asbestos regulations. The principal impurity in these deposits, however, is fibrous anthophyllite which is covered.

2. Nytals (RTV, New York State) Tremolitic.

This is made up of amphibole nonfibrous tremolite, nonfibrous anthophyllite and some platy serpentine (antigorite). A very small amount of chrysotile may be present. It has virtually no fibers by the CST definition but plenty of "OSHA fibers."

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3. Western Tremolite Talcs. (J/M=Desert Talc, RTV=Westal)

These contain no asbestiform material at all. Main impurity is dolomite. J/M has just started to put the asbestos warning label on their products of this type, probably due to the cleavage type "OSHA fibers" that are generally present in substantial quantity.

4. Pfizer Steatitic Talc. (Nontremolitic)

There are blocky, massive, relatively pure mineral talcs. They originate from altered serpentine and contain some small amounts of chrysotile as an impurity.

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