

Research file

(see also, Asbestos file)

CAMBRIDGE

PLAINTIFF'S
EXHIBIT

WRG-72

RECEIVED

JUL 31 1973

CONSTRUCTION PRODUCTS DIVISION
H. A. C.

TO: H. A. Brown

DATE:

02015356
JUL 26, 1973

FROM: H. C. Duecker

SUBJECT:

Asbestos in
Vermiculite and MONO-KOTE

CC: R. M. Vining

Ref: Yang's 6/26/73 memo,
Brown's 7/10/73 memo

Normally, the analyses of tremolite in MONO-KOTE and vermiculite are given only by ore sources. Yang's memo of June 26, 1973 was a compilation of data to be submitted to the EPA with the intention of showing that MONO-KOTE contained no more than trace quantities of tremolite. To be accurate, all analyses had to be considered. The picture regarding the relative tremolite contents of Enoree and Libby vermiculite is not clear to us at this time and the data were purposely presented as they were in view of the following facts:

1. Using our x-ray diffraction technique, tremolite has thus far been detected only in MONO-KOTE made with Enoree vermiculite. No tremolite has been detected in any analysis of MONO-KOTE made with Libby vermiculite. (Correction: 1 sample with tremolite.)
2. Microscopic examination of the Enoree MONO-KOTE samples which contain tremolite shows that at least some of this tremolite is present in the fiber form.
3. We have not yet developed a technique for determining the ratio of platy to fibrous tremolite within a sample of MONO-KOTE or vermiculite, and therefore cannot make further statements in scientific confidence.

It is our opinion that:

- a. The platy tremolite of the Enoree deposit is higher than the platy content of the Libby deposit.
- b. Platy tremolite is more difficult to separate from platy vermiculite (in the milling process) than is fibrous tremolite.
- c. The platy tremolite has some tendency to fragment upon expansion, giving some tremolite falling within the fibrous definition. However, we believe that the majority of the tremolite remains in the platy form.

In conclusion, it is our opinion that Libby and Enoree MONO-KOTE may contain trace amounts of fibrous tremolite at concentrations less than the limit of detection using the x-ray diffraction technique. Enoree MONO-KOTE may also contain platy tremolite. The average content of the total tremolite in MONO-KOTE is about 0.2-0.5%. (Due to the inhomogeneity of the product and day to day variation, individual samples may give higher values, but an entire bag of MONO-KOTE probably never contains more than 0.2-0.5% total tremolite.)

Duecker

H. C. Duecker

HCD:mlr

