FILE NAME: Rogers Corporation (ROG)

DATE: 1977 Aug 3

DOC#: ROG043

DOCUMENT DESCRIPTION: Memo RE National Bureau of Standards Asbestos Workshop - A Synopsis

August 3, 1977

SUBJECT: National Bureau of Standards Asbestos Workshop - A Synopsis

FROM: RFLee

TO: NLG HHB RCB RLS HEB CAB FJJ WAH CGM EHamer MKupsaw JBOtto LAWalters RESanders

I. Background.

On July 18, 19, and 20, I attended the above mentioned workshop jointly sponsored by the National Bureau of Standards and the Occupational Safety and Health Administration. This memo will offer a brief outline and summary of the salient topics discussed.

II. Summary.

Considerable debate developed on defining not only what is asbestos, but on what constitutes a fiber. Present optical microscopy using the OSHA criteria for measuring "fibers" between 5 μm - 100 μm in length, with a length to width aspect ratio of 3:1, cannot deleniate asbestos from asbestiform minerals. Consequently, if other material is present in the sample being tested, besides asbestos, it probably will be counted as asbestos. The U.S. Geological Survey, Mine Safety Administration, and ASTM E-34 Committee strongly recommended changing the aspect ratio from 3:1 to 5:1 or 10:1. This move was supported by significant medical opinion.

One point stressed repeatedly throughout the session by the medical researchers was that no threshold limit pertaining to defining a no cancer threat was established. However, several researchers presented convincing data that shows "fibers" ≤ 0.25 μm (diameter) x > 8 μm (length) yielded several orders of magnitude more cancers than those approaching the 3:1 aspect ratio of the "federal fiber" definition.

It was established that the medical consensus was that carcinogentic effects upon humans was not limited to asbestos, but probably is caused by any material which is capable of becoming fibrous (either naturally or otherwise), meets the above crucial aspect ratio, and is highly resistant to chemical breakdown.

Much heated discussion centered on the relevance of animal implacement tests (Ames Tests) versus animal inhalation tests. Almost exclusively the implacement tests show no threshold limit for non-development of cancers, whereas inhalation tests show very little actual carcinogentic development. A similar situation exists relative to tobacco carcinogencity according to M. Schneiderman of the National Cancer Institute. He stated that animals with surgically implaced tars and nicotine develop high percentages of lung

cancers; whereas to his knowledge, nobody worldwide, has conclusively shown that animal inhalation of tars and nicotine has ever caused a single incidence of lung cancer. (This statement has been recorded on tape for posterity.) So it would appear there is considerable diverse opinion concerning the human exposure relationship with the animal implacement tests.

OSHA discussed their current regulations and did state that the existing 2.0 fibers/cc, 8 hour TLV standard would be lowered "shortly." Although no target level was indicated, the OSHA representative (Mr. Willard Dixon) did state he doubted that they would incorporate NIOSH's 0.1 fibers/cc recommendation.

Mr. Hehir of the Consumer Products Safety Commission presented a discussion on their mechanism for evaluating consumer product saftey. Basically, their approach concerns degree of distribution of product containing toxic material, epidemiological risk assessment studies, and availability of alternative products without toxic materials. Although the potential for asbestos, in this case, to become airborne is considered if it is high, it is ignored if it is low. The recent banning of two asbestos containing products offers examples of the above implied contradiction.

Artificial fireplace ash, free form asbestos, was banned because the potential to become airborne was high and the product filled no critical requirement.

Asbestos containing patching compounds were banned not because of the potential to become airborne (which was low even in application, zero in use, and moderate in demolition), but solely because substitutes not containing asbestos were available.

The implications for the future in this arena are foreboding.

Considerable discussion centered on the analytical techniques of detecting asbestos, measuring particle sizes and determining physical/chemical properties.

Finally, a presentation was made by L. Bruckman of the Connecticut Department of Environmental Protection pertaining to their studies on developing a state-wide ambient asbestos level of 30 nanograms per cubic meter of air. During the course of this discussion, reference was made to our MMD operations (without mentioning us by name) and some compliments were paid to our engineering efforts to comply with existing regulations. (This, too, has been immortalized on tape.)

Most of the presentations were taped and are available in Corporate Engineering to those who might wish to hear them. Please review Section III of this report to determine quality of taping--some are good--others are terrible.