FILE NAME: US Gypsum (USG)

DATE: July 31, 1973

DOC#: USG085

DOCUMENT DESCRIPTION: 1973 Letter to M Ehrmann from Dr Selikoff regarding research on toxicity of asbestos

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Department of Community Medicine

July 31, 1973

Mrs. Marie Ehrmann
Librarian-in-charge
Research Center Library
United States Gypsum Company
1000 East Northwest Highway
Des Plaines, Illinois 60016

Dear Mrs. Ehrmann:

There is a vast literature reporting results of investigations into the comparative toxicity of chrysotile asbestos, in relation to other fibers. In summary, no significant difference was found; all varieties show important fibrogenic and carcinogenic activity. At your request, we will provide some of the most pertinent references.

Insofar as human effects are concerned, it is conceivable that the animal models do not reflect a difference which might exist among the fiber varieties; this possible difference is the subject of investigation in a number of ways. Dr. McDonald considers that his studies in the chrysotile mines in Quebec have shown less lung cancer and mesothelioma than other asbestos-exposed groups. Very worrisome is his observation that more heavily exposed chrysotile miners had five times as much lung cancer as those more lightly exposed(1). This would provide clear evidence of the carcinogenic effect of chrysotile asbestos, since the individuals concerned had been exposed only to this fiber variety. Too, review of x-rays among these men has shown numerous cases of asbestosis, demonstrating the fibrogenic effect.

In addition to mine and mill employees, studies have also been undertaken of factory populations thought to be exposed only to chrysotile. This is more complicated, since it is difficult to be absolutely sure that the populations concerned never had <u>any</u> exposure, however small, to other fiber varieties. One such study was reported by Dr. Thomas Mancuso in 1963, and an important cancer risk of the population investigated was found(2). Another study has been reported at scientific meetings by Dr. Joseph K. Wagoner of the National Institute for Occupational Safety and Health. While this has not yet appeared in the scientific press, I am sure that you will be able to obtain a copy of the manuscript from Dr. Wagoner.

PLAINTIFF'S EXHIBIT USG-137

Dr. Joseph Wagoner, Acting Director
Division of Field Studies & Clinical Investigation
National Institute for Occupational Safety and Health
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In obtaining information on the question, advantage may be taken of another set of circumstances. Amosite and crocidolite, the other two major fibers used in commerce, are not mined in North America, and must be imported. Records of these imports have been kept by the Department of Commerce. We find that only trivial quantities of these fibers were imported until the 1940's and of these small amounts, crocidolite was not used in any insulation materials, although amosite was. Therefore, experience of asbestos insulation workers during the 1940's and 1950's (especially, the former) cannot be ascribed to other than the one asbestos fiber that was in regular use in insulation materials during the 1930's - chrysotile. Since lung cancer rates, as well as the occurrence of mesothelioma and deaths of asbestosis, were demonstrably increased among these men during the 1940's and 1950's, we may infer the chrysotile-associated risk among them(3-5).

Since the problem is an important one, I expect that more information will become available within the next several years.

Sincerely yours,

Irving J. Selikoff, M.D.
Professor

IJS:jlr

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2. Mancuso, T.F. and Coulter, E.J. Methodology in industrial health studies. The cohort approach, with special reference to an asbestos company. Arch. Environ. Health 3(2):210-226 (Feb.) 1963.

3. Selikoff, I.J., Churg, J. and Hammond, E.C. Asbestos Exposure and Neoplasia. J.A.M.A. 188:22-26, 1964.

4. Selikoff, I.J., Churg, J. and Hammond, E.C. The occurrence of asbestosis among insulation workers in the United States. Anns. N.Y. Acad. Scs. 132(1):139-155, Dec. 31, 1965.

5. Selikoff, I.J., Hammond, E.C. and Churg, J. Asbestos exposure, smoking and neoplasia. J.A.M.A 204(2):106-112, April 1968