

Health Services and Mental Health Administration  
Room 8409, Federal Office Bldg.  
550 Main Street

XXXXXXXXXX

National Institute for Occupational  
Safety and Health

September 9, 1971

Dr. Lee Grant  
Pittsburgh Plate Glass Co.  
One Gateway Center  
Pittsburgh, Pennsylvania 15222

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Dear Dr. Grant:

Referring to our conversation on Tuesday concerning the concentration-times-time relationship of asbestos dust exposure to clinical changes, I would like to quote from a recent publication of the National Air Pollution Control Administration,\* which states: "Asbestosis usually develops after long exposure to high concentrations of dust. The risk varies directly with the length of exposure and dust concentration. Following continued exposure to high concentrations of dust, asbestosis may develop fully in 7 to 9 years and may cause death as early as 13 years from onset of exposure." Other articles that show this concentration-times-time relationship are as follows:

1. Lanza, A. J., McConnell, W. S., and Fehnel, J.: Effects of the Inhalation of Asbestos Dust on the Lungs of Asbestos Workers. Public Health Reports, 50, 1935, 1.
2. Dreesen, W. C., Dallavalle, J. M., Edwards, T. L., Miller, J. W., and Sayers, R. R.: A Study of Asbestosis in the Asbestos Textile Industry. Public Health Bulletin #241, U. S. Treasury Department, Public Health Service, Washington, D. C., 1939.
3. Gaensler, Edward A., and Kaplan, Alfred I.: Asbestos Pleural Effusion. Annals of Internal Medicine, Vol. 14, No. 2, Feb., 1971.
4. Hunt, Ross: Routine Lung Function Studies on 830 Employees in Asbestos Processing Factory. Annals of the New York Academy of Sciences, Vol. 132, Art 1, Page 406, 1965.
5. Williams, Roger and Hugh-Jones, P.: The Significance of Lung Function Changes in Asbestosis, Thorax, Vol. 15, 109, 1960.
6. Solikoff, I. J. and J. Churg, and B. C. Hammond, The Occurrence of Asbestosis Among Insulation Workers in the United States, Ann. N. Y. Acad. Sci. 132: 139 (1965).

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Dust concentrations in these articles represent similar concentrations to those found in the Fort Allegany plant by the United States Public Health Service. As you can and will see these articles indicate that the clinical changes, which occur with exposures of less than seven years duration are consistent with Asbestosis.

If you have any other questions concerning this relationship please feel free to contact me.

Sincerely yours,

Richard A. Lemen  
Senior Assistant Sanitarian  
Division of Clinical Investigations  
and Field Studies

\*Sullivan, Ralph J. and Athanassiadis, Yanis C.: Preliminary Air Pollution Survey of Asbestos - A Literature Review. National Air Pollution Control Administration Publication No. APTD 69-27, October, 1969

cc: Mr. David L. Bayliss  
Dr. William Johnson  
Dr. Joseph Wagoner

*WJ*

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