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April 24, 1991

Judy Spencer
Legal Section
Industrial Commission of Ohio
30 W. Spring St. 9th Floor
Columbus, OH 43266-0581

O.D.: 204731
Claimant: Earl Callahan
Company: Riley Stoker Co.
5 Neponset St.
Worchester, ME 01515

Dear Ms. Spencer,

Earl Callahan is a 60 year-old man who worked as a boilermaker for approximately 35 years, retiring in 1990. During that period he worked out of a union local for a large number of employers. He alleges that exposures to asbestos-containing materials encountered during his employment caused him to develop asbestosis.

Boilermakers have a reasonable risk of exposure to asbestos-containing materials because of the nature and timing of their work. In new construction, it is more likely insulation tradesmen would be applying insulating materials. In repair or modification of existing structures, however, it is likely that the boilermaker would be involved in removal and replacement of insulation.

It is impossible to determine when Mr. Callahan may have received the first or last injurious exposure to asbestos-containing materials, or what the levels of exposure may have been. Working out of a union hall makes it especially difficult because jobs vary in location, duration, and type of work being done. Since the latency period for the development of most forms of asbestos-related respiratory disease is so variable, symptom onset cannot be used to determine when or where exposures occurred.

The relationship between exposures to asbestos-containing dust and the diseases which are associated with those exposures are well documented. Mr. Callahan began working working prior to the time when these facts were widely known. Also, before the advent of OSHA regulations in 1971, little attention was paid to personal protective equipment in general, and respirators in particular. As a result, exposures were generally high in those industries that were naturally dusty by virtue of raw materials used and products made. Since EPA banned the use of asbestos in all new construction in 1978, asbestos-containing insulation would have been removed by others according to regulations, and not by the boilermaker.

Dr. Kelly has made a diagnosis of asbestos-related disease based upon x-ray and other evidence. He also indicates that childhood asthma, pneumonia and smoking would have no bearing on the disease development. Medical experts generally agree that test results, signs and symptoms used in the determination of asbestos-related disease are somewhat ambiguous, making diagnosis complex, if not difficult. A paper by Murphy[1], states "The chest roentgenogram is the best means to exclude many other diseases as well as to quantitate their importance when present. The major problem is with the nonspecificity of the findings, particularly in detecting slight or early disease. Bilateral, small, irregular, and linear opacification (more predominant in the lower lung fields) and associated pleural disease are the most commonly accepted features of asbestosis. When found in an advanced degree with known exposure, specificity for asbestosis is high. However, when irregular, linear, basal opacities are present in slight profusion, they are easily confused with the normal vascular markings, with shadowing caused by poor inspiration, with soft tissue densities due to breast or other fatty tissue, and by the effect of low kilovoltage - making this interpretation one of the most subjective in radiology." This quote demonstrates the difficulty of diagnosing asbestos-related disease, and the importance of high quality x-rays and their interpretation.

Another point of question in this claim is the smoking aspect. Mr. Callahan has a significant smoking history which would play a significant role in respiratory disease development. According to the American Lung Association[2], "Cigarette smoking is the most important cause of chronic obstructive bronchopulmonary disease (COPD) in the United States. It increases the risk of dying from pulmonary emphysema and chronic bronchitis. Smokers show an increased prevalence of respiratory symptoms, including cough, sputum production, and breathlessness, when compared with non-smokers. For the bulk of the population of the U.S., the importance of cigarette smoking as a cause of COPD is much greater than that of atmospheric pollution or occupational exposure".

Pulmonary function test results by Dr. Venizelos "...reveal a mild obstructive abnormality". Obstructive disease is most often caused by smoking, while asbestosis is causes restrictive defects in the respiratory system.

In summary, because of his long employment as a boilermaker, it is likely that Mr. Callahan was exposed to varying amounts of asbestos-containing materials. While exposures do not guarantee disease development, he certainly is among those at reasonable risk.

If I may be of further assistance with this claim, please let me know.

Sincerely,

James S. Ferguson, CIH
Industrial Hygienist

References:

1. Occupational Lung Diseases, Weill & Turner-Warwick, Marcel Dekker, Inc., N.Y., 1981.
2. Pulmonary Function Tests in Clinical and Occupational Lung Disease, Miller, Ed., Grune and Stratton, Inc., N.Y. 1986.
3. Asbestos Related Disease: Difficulties in Diagnosing Occupationally Related Illness, Murphy, R., Frontiers in Medicine, Feb. 10, 1981.
4. Federal Register, Vol. 57, #119, June 29, 1986.
5. Chronic Obstructive Pulmonary Disease, American Lung Association, N.Y., 1977.
6. Development, radiological zone patterns, and importance of diffuse pleural thickening in relation to occupational exposure to asbestos, Bohlig and Calavrezos, British Journal of Industrial Medicine, 44:673-681, 1987.
7. Asbestos: Scientific Developments and Implications for Public Policy, Mossman, et al. Science, vol. 247, February, 1990.
8. Hughes and Weill, Asbestos Exposure - Quantitative Assessment of Risk, Am. Rev. Respir. Dis., 133:5- 13, 1986.

Riley Stoker Co.
- Worchester

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