FILE NAME: Goodyear (GY)

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STATE OF OHIO
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OCT 6 1975

Legal Section
Industrial Commission of Ohio
Ohio Departments Building
Columbus, Ohio 43215

Re: O.D. 11411-22
Ruth F. Griffin

Attention: James G. Clymer
Room 223

Gentlemen:

On July 30, 1975, a visit was made to the B.F. Goodrich Company, 500 S. Main St., Akron, Ohio to check conditions under which the claimant had worked.

The company is the manufacturer of various rubber products.

According to company records, the claimant's experience is as follows:

DATE	DEPT.	POSITION
11-30-36	7510	Not known
9-22-39	7510	" "
10-3-40	7638	" "
11-21-41	1135	" "
1-2-42	7638	" "
1-26-42	7510	" "
10-25-45	7638	" "
9-13-48	7614	build fuel cells
12-31-51	7917	?
3-10-52	7915.	Inspect light weight fittings
3-17-52	7917	Inspect tap and gauge fittings
3-7-55	7920	Inspect brake tubes
3-21-55	7917	Inspect molded fittings
10-3-55	7914	?
1-23-56	7920	building brake tubes
7-30-56	7921	building aeronautic products
8-1-56	1828	?
10-1-56	1827	building brake tubes
12-13-56	1828	building aeronautic products
10-31-73	1828	building non-zipper products

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From 1936 to 1952 the claimant states she worked on auto parts,

brake shoe assemblies (Dept. #7510) and C.I. Tubing (#7638) here she cut and couled tubing or dusted the hosing with soapstone powder. From 1948-1951 she worked on fuel cells.

The claimant had a pre-employment physical without pulmonary testing. On 8-10-73 Dr. Arnold Gold, company physican, diagnosed her chest X-rays as moderately advanced pulmonary fibrosis. On 5-1-74 Dr. C.W. Reynolds, personal physician, diagnosed a pulmonary fibrosis. On 12-20-74 Dr. Harold May, company doctor, summarized his tests were inconclusive and further pulmonary function studies with perhaps fluoroscopic examination of the lungs were necessary.

The operations that the claimant worked for her entire 34 years has been removed from the Akron plant, and was relocated to Richwood, West Virginia, two years ago.

The following are the claimant's and company's job descriptions: Dept. 7510: For 7 years starting in 1936 she assembled auto parts such as brake shoe units, which she first washed (cleaned) with benzene or gasoline before applying cement to the shoe and metal assemblies,

Dept. 7638, C.I Tubing: Soapstone (talc) powder was applied with a handcloth to rubber tubing. Sometimes she would be covered "white" with the dust and therefore wore a cap over her head. She also cut and reeled tubing into coils.

Dept. 1135- no information available.

Product inspection from 1952-1955 did not involve significant exposure to health hazards.

In 1948-51 and from 1956-1973 the claimant was a builder of various assemblies. Generally this involved the application of fabric plies onto metallic forms or molds using neoprene rubber cement and solvent thinners. The molds are first washed down with either methyl ethyl ketone or a 50/50 mixture of propyl acetate/aliphatic naphtha. Several plies of either fiberglass, nylon, or cotton matting were brushed or rolled onto the molds with neoprene or butyl rubber cement binder thinned with the same solvents. Neoprene was used probably at least 75% of the time, as opposed to the butyl or natural gum rubbers. The finished rubber products would then be transferred to vulcanizing ovens to be cured, of which this process the claimant did not participate.

Routinely, buffing of residual rubber that adhered to previously used molds would be performed. For 6 years (1960- 1965) the claimant buffed "zipper" flap to eliminate undesired cured rubber parts. She believes the buffing to be her dustiest occupation.

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Tools used on the jobs were small hand tools- brush, roller, stitcher, shears and inspection gauges. As a builder she would

make aeronautic parts such as axle boots, tail cone floats, bonding bag frames, fuel cells, glare shields, fuel tank accessories, dividers, etc. Work would usually be done on the floor or large table. Sometimes pieces would consist of several room or table lengths.

Ventilation of the building consisted of wall fans. The buffing machines were equipped with local exhaust and collection gag. The claimant did not wear a respirator and as far as known did not have one readily available.

The company stated that special asbestos mat fabric sheath coverings were used for brake "boot" tubes for earth moving equipment (Dept. #1827) to eliminate brake friction heat and prevent cracking of rubber. This began in 1959-60. The claimant last worked this department in 1956. Asbestos was not used elsewhere. Although not positive, the claimant believes she has worked with asbestos fabric.

"Benzene" and "gasoline" terms are sometimes used interchangably by employees. The company believes that benzene was actually replaced by gasoline in the 1940's. Exposure to benzene affects the bone marrow of the body. The most consistent exposure may have been to methyl ethyl ketone, propyl acetate, aliphatic naphtha (hexane), and chloroprene vapors. Of these four chloroprene is known to be a systemic intoxicator and causing lung, liver, and kidney damage. Recent research has revealed it to be a potential skin and lung carcinogen. These vapors would exist as unreacted chloroprene monomer in the neoprene cement.

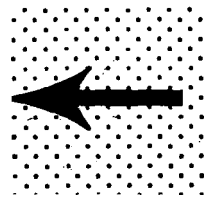
Working with brake shoes, which contain bonded asbestos, in Dept. 7510 as previously described certainly may entail an asbestos exposure. Acute heavy exposures were improbable as air hoses, grinding, or buffing operations were not known to be in the vicinity. However, the claimant may have been exposed to a consistent low concentration (present TLV= 2 fibers/cc) for over 7 years. Asbestos is a remarkably toxic substance causing a pulmonary fibrosis, asbestosis. One or several acute exposures are thought to be enough to bring about the disease, of which the symptoms and promulgation may lay dormant for years.

Exposure to fiberglass particles are thought by some researchers to be as hazardous as asbestos fibers in as much the problem may be in the size and shape of the particle (thin, rod shaped) rather than its physical composition. A study completed in 1971 by Dr. Merle Stanton of the National Cancer Institute indicate that certain size of fibrous glass is a potent carcinogen in the pleura (outside lining of lungs) of rats. The claimant, through perhaps 20 years, may have been exposed to glass fibers while buffing or handling the mats.

Soapstone traditionally may contain significant per centages of free silica, tremolite, or fibrous talc, all potent pneumoconiosis producing agents. An analysis of one of the company's talc by this Division in 1948 showed a 3-5% tremolite composition.

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Soapstone is a general non-mineral term used to describe a wide variety of material. It usually contains a large percentage of talc, which by itself is not considered very toxic although it may contain tremolite, a suspected parthogenic carrier. One type of talc ore deposit is formed from carbonate rocks and usually a predominance of talc, tremolite, and anthophyllite, which appears to be a greater industrial health problem than the other type which contains talc, chlorite, carbonate, and vermiculite. Fibrous talc has the same threshold limit value (TLV) as asbestos which would categorize it as highly toxic. Dust containing free silica causes silicosis, a pulmonary fibrosis which is one of the most important of malignant fibrogenic pneumoconioses and the most common and one of the most serious of all pneumoconioses. Soapstone exposure would have been consistent for about 4 years and intermittent throughout her work life.



It is concluded that the claimant may have had an accumulative exposure to fibrous and dust particulates for approximately 31 years.

Sincerely yours,

Brian K. McClelland

Brian K. McClelland
Industrial Hygienist

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