

PLAINTIFF'S
EXHIBIT

WV-06289



17.15
1/10/73

Inter Office

Personnel and Organization Staff

March 7, 1973

Mr. J. A. Keller, Supervisor
Personnel Services Section
General Services

cc R. M. Charles
M. A. Harris, M.D.

Subject: Asbestos in Air Sampling - Research and Engineering

The Department of Labor, under the authority of the Occupational Safety and Health Act of 1970, in Section 1910.93a of the Federal Register dated October 18, 1972 has promulgated occupational health standards in relation to the use of asbestos and asbestos laden materials. In response to these standards, a survey of Research and Engineering operations relevant to the use of asbestos was conducted. Two operations in the Research and Engineering Center located in the Scientific Building and Experimental Garage were reported to employ asbestos in conjunction with the brake operations. Results of air samples taken at these locations are attached.

The operation located in the Scientific Building involves the compound-
ing of experimental brake shoes and pads and the operation located in
the Experimental Garage involves grinding and dressing of replacement
brake shoes and pads. Local exhaust ventilation is used as control at
both locations. In addition to local exhaust, an approved dust respirator
is worn in the asbestos operations at the Scientific Building.

Specifically, Section 1910.93a of OSHA October 18, 1972 Federal Register
states that the Threshold Limit Value (TLV) for asbestos is 5 fibers
greater than 5 microns in length per milliliter of air. On July 1, 1976
the TLV shall be reduced to 2 fibers greater than 5 microns in length
per milliliter of air. These are 8-hour time weighted average exposure
limits. The ceiling limit for exposure is set at 10 fibers greater
than 5 microns per milliliter of air.

When the TLV and ceiling limit are exceeded, engineering and/or administra-
tive controls and/or respiratory protection is required and also caution
signs must be posted at the stations. Special clothing must be provided
when the ceiling limit is exceeded. In addition, the employee must be
notified of his over exposure to asbestos within five days of the finding.
Waste material which contains asbestos must be disposed in impermeable
containers with caution labels (OSHA 1910.93a subparagraph g - "Caution
Signs and Labels" pp 22143-22144) if subsequent handling of the waste
could result in excessive dust concentrations.

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A review of the attached data indicates no air samples exceeded the 5 fiber TLV. One air sample approached the 10 fiber ceiling limit. This sample represents one of the four operations performed in the compounding and destructive testing of brake material and therefore should be considered a peak sample with the 10 fiber Ceiling Limit applicable. Although the elevated sample is within OSHA limits, it is marginally so and action is suggested to reduce the dust level. This should consist of improving local exhaust ventilation for sawing, filing, and destructive testing. Disposal of asbestos laden waste material as recommended by the OSHA standards is recommended.

The brake research operation will be air sampled again in May 1973 under the monitoring provision of OSHA 1910.93a subparagraph f.

Henry B. Lick
Industrial Hygienist
Industrial Hygiene Section

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Attachment

Field ReportResearch and EngineeringLocation

Concentration of Fibers
Greater than 5 Microns in
Length/Milliliter of Air

OSHA Asbestos Fiber Threshold Limit Value (TLV) 8-Hour Time-Weighted
Average Exposure

5

OSHA TLV as of July 1, 1976

2

OSHA Ceiling Limit

10

1. Brake Research Laboratory

a. Compounding brake material, E. Elais, SS #6921 - Worker's breathing
zone air sample (MZ).

0.2

b. General room air sample, compounding lab.

0.02

c. Brake friction testing function, E. Elais, SS #6921, MZ - filing and
band sawing of bound and cured brake lining (peak sample)
(estimated less than one hour per day exposure).

9.9

d. Band saw room, general room air sample.

0.01

2. Experimental Garage

Grinding and dressing of brake shoes on Rotunda Brake Shoe Machine,
operator W. Kett, SS #7137, MZ.

0.1

Instrumentation: MSA Model G Portable Pump at 2 Liters per Minute and Millipore Type AA Membrane Filters.

Analysis: #30K Phase Contrast Microscopy by Environmental Health Laboratories, Farmington, Michigan