

OCT 21 1983

F-Libby

Libby
10-27
31

CAMBRIDGE

WRG 000570

TO: R. C. Walsh
FROM: H. A. Eschenbach

DATE: 18 October 1983
cc: J. H. Berke
W. McCaig
J. W. Wolter

SUBJECT: Meeting 17 October 1983, Patrick Sebastien and Ben Armstrong

The major portion of our discussions concerned the method of determining fiber exposures of our employees. I described the work of the Fiber Committee in Libby in selecting what values appeared to be logical for each job and how we used this data in the computer to arrive at an average exposure and an estimated fiber year exposure. We went through the historical inspection data and dust counts done by the State of Montana as well as MSHA and its predecessors. We also discussed data from our own sampling through 1976 when Randy Geiger started his program. Patrick would like to have copies of Randy's annual summaries through 1982 in addition to the other reports. I did not provide copies of any at this time but promised to do so in the not distant future. Armstrong, who is a statistician, then spent some time with Al Stockett.

Patrick will visit Libby during the week of 28 November to gather further data and speak to Geiger and Lovick and will do his sputum work at that time.

I queried Patrick about the progress in the study of McNair's lung. He supplied me with two pages from his notebook and promised a written report shortly. In essence, his report will say the following: Uncoated total fiber content of the lung was 49.7 million fibers per gram of dry tissue. 87% of this fiber was tremolite or tremolite containing some iron which he calls tremolite actinolite. He indicates that an average person would have far less than one million fibers per gram of dry tissue. There were 1.45 million fibers per gram of dry weight of coated fibers. He could not estimate what one could expect in a normal lung. Patrick pointed out that the uncoated fiber size distribution in McNair's lung was remarkably

similar to that which he found in analyzing air samplings from Libby. There appeared to be no significant amount of chrysotile in McNair's lung but there was approximately 3.5% of other amphiboles which he thought were probably anthopholite. I have given you a picture of the slide upon which the mineral content of the lung tissue was deposited after digestion of the soft tissue. Clipped to the picture was a copy of his notebook pages.

Allison and Corbett will return on 1 December.



H. A. Eschenbach

HAE/cs

attachment



1st LABBY SAMPLE

4 Samples	1	UPPER w/o	RLI	83070102
	2	LOWER w/o	RLI	83070104
	3	UPPER w	RLI	83070101
	4	LOWER w	RLI	83070103

Etude au Microscopie Electronique = Transmission. Uncoated Fibers

Extensite Analyzed 7.46 μg .
 Uncoated Total Fibers 371 [49.7 Million / 2 dry tissue]

Fiber Type.

Tremolite + + +

Trem - Act +

Act

Act - Trem.

87 %

Other fibers including
 wollite, iron, aluminum,
 glass fiber and oxidized

9.4 %

Other amphiboles, perhaps
 Actinolite

2.5 %

Study in optical Microscopy for Coated Fibers

Extensite Analyzed. 2116.4 μg .
 Coated Fibers -3082 - [1.48 Million / gram d.w.]

UNCOATED TREMOLITE BY SIZE

	<u>SHORT</u>	<u>STANTON</u>	<u>OPTICAL</u>
44.5 MILLION /g.	55.7 %	2.4 %	41.9 %

TOPOGRAPHICAL DISTRIBUTION.

UPPER W/O	— .81	— .79	— 1.05
LOWER W/O	1.54	1.04	1.50
UPPER W	.83	.97	.78
LOWER W	.90	1.20	.66

COATED FIBERS.
TOPOGRAPHICAL DISTRIBUTION.

