PLAINTIFF'S EXHIBIT

DUP-262

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RESPIRATORY PROTECTION - ASBESTOS
(Ref.: Correspondence - Asbestos Seminar, JGPlasky to RJGeisen, dated February 21, 1973)

As Haskell Laboratories' Respirator Program Administrator, Dick Geisen asked me to comment on the questions that arose during the referenced seminar concerning respiratory protection for asbestos. These questions were expressed under item three of the notes from the seminar.

3.a. When should respirators be worn?

The current permissible exposure limits to airborne concentrations for asbestos fibers (effective July 1, 1976) are: (1) two fibers longer than 5 u/cc as an eight-hour TWA and (2) ten fibers longer then 5 u/cc as a ceiling, (as determined by a minimum 15-minute sampling period).

When either or both of these exposure criteria are exceeded, respiratory protection is required. However, respirators may only be used as a means of achieving compliance:

- During the time required to install engineering methods or controls, and institute work practices necessary to achieve compliance.
- In work situations in which engineering methods or controls are not technically feasible, or not feasible to the extent that they are insufficient to achieve compliance.
- In emergencies.

Where both respirators and personnel rotation can be used in the above situations, and both are practicable, personnel rotation is preferred and must be used.

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Once non-compliance is determined and respiratory protection is instituted, then a respiratory protection program must be established and executed in accordance with 29 CFR 1910.134 (selection, fit testing, respirator maintenance, etc.). Even if an area is in compliance and one decides to use respiratory protection just to be "safe," the requirements of 1910.134 still apply. Consequently, it would behoove a plant to achieve compliance by engineering means and to be prudent and judicious in the use of respirators.

3.d. What respirators should be worn - throw away or permanent?

This question implies a little more latitude than is available, I think. First, respirators selected must be NIOSH/MESA approved; second, the type of respirator used is governed by the expected extent of overexposure.

If the overexposure is reasonably expected to be no more than 10 times the ceiling and/or eight hour TWA exposure criteria, then reusable or single-use air purifying respirators are the minimum required. Any air purifying respirator listed in the NIOSH Certified Equipment Supplement, (June 1977), publication No. 77-195, under approval number TC-21C-A would be acceptable for respiratory protection against asbestos under these exposure criteria.

Several of this type are available including reusable, valved cartridge type, and single-use valveless mask type. Some examples suitable for asbestos containing dust are listed below.

Company	Type	Model	NIOSH/MESA Approval No.
Scott	Replaceable dual cartridge (valved)	6413-2100	TC-21C-178
3 M	Single use mask (valveless)	8700	TC-21C-132
	Reusable mask (valveless) can be used up to three full work shifts	9900	TC-21C-176
Willson	Reusable cartridge	1211 with R-11 cartridge	TC-21C-141

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If the overexposure is reasonably expected to be 10 times but not 100 times the ceiling and/or eight hour TWA exposure criteria, then powered air purifying respirators are the minimum required. These are available from several major respirator manufacturers. They are quite expensive ($600-$800) but are battery powered and allow mobility. They utilize high efficiency filters which would provide adequate protection from asbestos under these exposure criteria. 3M Company makes several types and are listed in the NIOSH Supplement under approval No. T-21C-136A

If the overexposure is reasonably expected to be 100 times the ceiling and/or eight hour TWA then type "C" supplied air, continuous or pressure demand respirators are the minimum required. Any supplied air respirator listed in the NIOSH Supplement under approval No. TC-19C- would be acceptable for respiratory protection against asbestos under these exposure criteria. These provide the highest degree of protection of the three, but limit mobility due to hose length.

3.h. What labs are recommended and what are prices/sample?

Attached is a list of AIHA accredited laboratories. The highlighted ones are certified for asbestos counting. I would recommend an accredited versus a non-accredited lab for credibility. Which one would be a matter of discretion depending on proximity to the plant, sample turn around time, cost, etc. Cost will range between $20-$30/sample. Some labs will reduce the cost/sample depending on the number of samples submitted. Marshall Laboratory (F&F Department) has run asbestos samples for us in the past, George Hiddemen 339-6276 is the contact person there.

Hope this has been helpful. If you have any questions, please call me at 366-3972.

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INDUSTRIAL HYGIENIST

MES/daw
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Attachment

RJG

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