



The Bendix Corporation
Executive Offices
Bendix Center
Southfield, Michigan 48076

Mr. Gene E. Fax
ABT Associates Inc.
55 Wheeler Street
Cambridge, Massachusetts 02138

January 10, 1978

Dear Mr. Fax:

We appreciate the opportunity to review and comment on the training materials you are developing under contract to OSHA for brake shop managers and their employees.

We agree that training in the proper procedures to be followed in the use of products containing asbestos will benefit the general population. We would, however, make several recommendations in regards to the ABT Associates Inc. proposed program.

- The program does not stress the issue of what employees can do or should do to assist. Even if the majority of recommendations outlined in the training program were implemented, little would be accomplished if the employees avoid or flaunt the controls. As a result, the overall training program should portray a partnership between supervision and employees.
- We believe there are some factual errors in the program and have outlined them in the attached commentary.
- Finally, we do not believe that "scare tactics" and/or overkill are necessary to gain the attention of people to be trained by this program. We believe that logic, presentation of facts, and reason would more than suffice.

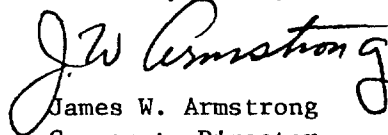
It is our hope that these comments will assist you in your endeavor to develop a well-balanced training program which will have the positive effect of improving the safety and health of those people working in



Mr. Gene E. Fax
Page Two
January 10, 1978

the friction materials industry. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely yours,


James W. Armstrong
Corporate Director
Safety & Protection
Services

JWA/glz

Attachment

cc: E. W. Drislane - Friction
Materials Standards Institute
R. H. Mereness - Asbestos
Information Association

FMSI 06901

COMMENTS - ABT ASSOCIATES INC.

The following comments are arranged in sequential order by page number:

Page 7 - Paragraphs 3 and 4

Mention should be made of controlling the workplace environment to limit asbestos exposure rather than emphasizing absolutes as implied by the phrase "get the asbestos out of the air."

Page 8 - Paragraph 2

Responsibilities of workers should be expanded to include additional items not specifically required to meet the letter of the standard but which will further meeting the intent of the regulations. For example:

- Prohibition on "drysweeping."
- Proper disposal of asbestos-contaminated wastes, such as rags, etc.
- Participation in medical surveillance program, etc.

Page 11 - 3.1, Subsection 5

This sentence should be reworded to include mention of the responsibilities of workers in addition to those of management.

Page 15 - Slide 2 - Script

This statement implies that mesothelioma is common among people exposed to asbestos when, in fact, it is relatively rare in any known population.

Page 16 - Slide 3

To introduce additional perspective with respect to harmful substances, it might be appropriate to add additional items such as toxic chemicals to this slide.

Page 17 - Slide 4 - Script

We suggest that the word "controlling" be substituted for "removing." This is a more realistic phraseology.

Page 19 - Slide 5 - Script

The third paragraph is too technical, tends to be confusing, and contains controversial and misleading statements. In addition, it appears that a slide is missing. We suggest that this paragraph be rewritten in its entirety.

Page 21 - Slide 7 - Script

The evidence with respect to gastrointestinal cancer is not conclusive at this point in time. Accordingly, the third paragraph and the slide reference should be deleted.

In the last paragraph, it should be pointed out that, although asbestos was not as widely used as it is today, exposures were substantially higher.

Page 24 - Slide 9

- Slide does not indicate length of sample period.
- Comparison not accurate for TWA.
- Slide does not indicate that operations are uncontrolled.

Page 26

If OSHA were to adopt the 0.1 fiber per cubic centimeter limit, the whole issue of compliance would, for the most part, be academic. It would for all practical purposes be necessary to live in an asbestos-free world.

Page 27

B.1 - Many of the comments in this section can be subject to sincere debate with little hope of resolution. In addition, the intent of this presentation is to educate people about asbestos, not to develop a program to sell OSHA.

Page 30 - Paragraph 2

It is certainly not true that an OSHA inspector "has to issue a citation on the spot." This should be corrected.

Page 33 - Slide 11B - Script

Initially, monitoring must be performed in such a way as to determine whether every employee's exposure is below prescribed limits. This may or may not require sampling of every employee. Thereafter, samples shall be of such frequency and pattern as to represent, with reasonable accuracy, the levels of exposure of employees whose exposure may reasonably be foreseen to exceed prescribed limits. Again, sampling of each employee is not specifically required.

Page 35 - Slide 11C - Script

This comment is not factual as written. At the present time, medical exams are mandated for all employees exposed to asbestos. Exposure is currently defined as greater than 0.1 fibers/cc.

Page 37 - Slide 12 - Script

These four operations, if uncontrolled, may produce dangerous levels of asbestos dust in the air. The addition of "if uncontrolled" puts the opening statement in perspective.

Page 42 - Slides 14 and 15

These slides depict employees wearing respirators, utilizing properly controlled equipment. If adequate engineering controls are in place, respirators are not needed. Accordingly, they should be deleted from these two slides.

Page 43 - Slide 14 - Script

- Currently, engineering controls are available that permit the use of compressed air to blow dust out of brake drums.
- Although brake linings contain silica and lead and the effects of overexposure are correctly stated, we do not believe that at the present time there is any evidence that would indicate that silica and lead are common hazards in brake relining operations.

Page 43 - Slide 15 - Script

The commentary appears to advocate the use of flexible, hence movable, ventilation configurations. We, on the contrary, recommend that ventilation approaches be as permanent as possible to guarantee use.

Pages 44 and 45 - Slide 16 and Slide 16 Script

- A regulated area such as the one depicted in Slide 16 is not required if asbestos is controlled.
- The wording of signs calling attention to asbestos is specifically delineated in the standard.

Page 48 - Slides 19 and 20

See comments regarding Slides 14 and 15.

Page 49 - Slide 20 - Script

It should be mentioned that this scenario would not occur if this equipment were equipped with the proper engineering controls.

Page 50 - Slide 21

See comments regarding Slides 14 and 15.

Page 55 - Slide 23 - Script

It is extremely difficult, even in ambient conditions, to be totally protected from asbestos fibers. This is, of course, compounded by emergencies, spills, and equipment breakdowns as indicated. The goal should be to protect the worker from excessive exposure.

Page 57 - Slide 24 - Script

We view this section as misleading. If proper engineering controls are in place, respirators are not needed.

The introduction of powered, air purifying, and supplied air respirators is pure overkill. In addition, the last paragraph sounds like a sales pitch for supplied air respirators. Finally, it is extremely unlikely that asbestos concentrations in operations of this type could concernably reach levels requiring powered or supplied air respirators.

Page 59 - Slide 26 - Script

It should be made clear that protective clothing is required only when exposures are in excess of the limit values. This is not mentioned in the script.

Pages 60 and 61 - Slide 27 and Slide 27 Script

Changing rooms are required only when employee exposures exceed the limit values. This is not mentioned in the script. In addition, if separate changing rooms were required, the arrangement depicted in Slide 27 would not be acceptable because the standard mandates that they be physically separated. In Slide 27, the changing rooms appear to be adjacent and not physically separated. Also, while two change rooms separated by a shower room is the ideal, a shower room is not required by regulation.

Page 65 - Slide 29 - Script

The statement "Both kinds of tests must be done at least every six months" is misleading. In point of fact, determinations of the TWA and ceiling levels is usually sufficient for both purposes.

Also, testing is required every six months for employees whose exposure may reasonably be foreseen to exceed the limit values.

Page 69 - Slide 31 - Script

This is another example of overkill. The sampling strategy contained in this section is unnecessarily extreme for the circumstances involved.

Page 69 - Slide 32 - Script

It should be mentioned that employees must also be informed of any corrective actions that are to be taken.

Page 33 - Slide 33 - Script

The terminology "Medical Exam Reports" is not entirely accurate. Actually, the medical documents involved are x-rays, pulmonary function tests, and questionnaires. These documents are more accurately described as medical records.

Page 73 - Slide 34 - Script

This section implies that management views workers as unintelligent. The use of phraseology such as "a lot of basic intelligence" and "repeat a few points often enough and over a long enough period for them to sink in," connotes an unfair and incorrect view of management sensitivity and attitude. This section should be rewritten.

Page 75 - Slide 36 - Script

The sentence "In brake shops, this is mainly a matter of installing vacuum lines at the affected work stations" is, if not in error, at least entirely over-simplistic. This is far from an acceptable summary statement with respect to engineering controls and should be rewritten to reflect the realities involved.

Page 77 - Slide 37 - Script

- The second sentence should be rewritten to contain the key concept "below two fibers per cubic..."
- "Annual medical exams must be given to" exposed workers, not "brake workers." If not exposed, no requirement for medical exams.
- "Hazardous asbestos wastes must be properly labeled" and disposed of. This point should be added.
- Finally, there is a slide depicting management's responsibilities. Should there not also be a slide depicting workers' responsibilities? This is discussed previously, and this is an ideal opportunity to reemphasize the dual nature of this responsibility.

Page 79 - Slide 39 - Script

For a closing comment, this one leaves a lot to be desired. Protecting the health of all employees certainly impacts the "company's accounts," and is a very real selling point to management. This should be utilized and not carelessly discarded.

The last sentence is overly dramatic, confusing and dysfunctionally related to the rest of the presentation.

In summary, your summary is not a summary and an appropriate summary should be developed.

Conclusions

The above commentary is relatively specific in nature; however, with respect to this presentation, it is possible to generalize the nature of our comments as follows:

- In several instances, the factual statements expressed are either in error, incorrectly stated, or in dispute.
- "Scare tactics" and overkill are frequently utilized to make a point, when logic and reason would more than suffice.
- Serious confusion within the presentation exists with respect to the concepts of control vs. elimination. Control is required, possible and appropriate. Elimination is not required, not possible and certainly not appropriate. This should be made very clear.
- Finally, engineering controls are presented as an alternative or redundant method. In point of fact, of course, the standard clearly requires that asbestos be controlled within allowable limits primarily through the use of engineering controls. It is not an alternative at all. It is mandated as the primary objective. Conversely, if asbestos is properly controlled, other means of protection are superfluous.