AIA-67

EXCERPTS FROM
ASBESTOS INDUSTRY RESPONSE
TO
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ON
PROPOSED REVISION TO ASBESTOS STANDARD
29 CFR PART 1910

- *LETTER OF TRANSMITTAL*
- *SUMMARY AND RECOMMENDATIONS*
- *MEDICAL STATEMENT*

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SUMMARY OF FINDINGS

The Task Force has reviewed the work of Dr. Weill and of Roy F. Weston, Inc., and from their reports has drawn certain conclusions.

Medical Statement

Although the volume of epidemiological data available for statistical anlysis in 1976 is greater than that available in 1972, the conclusions which reasonably may be drawn from those data are not significantly different from conclusions which were, or could have been, drawn in 1972. Then, as now, qualified experts would conclude that:

1. Asbestos, when inhaled, causes fibrosis (asbestosis).

2. Asbestos, when inhaled, is associated with the development of malignant tumors of the bronchial system and lung and with mesothelioma, (in other words, asbestos is a carcinogen).

Few, if any students of the subject would disagree with the conclusion that there is a dose-response relationship between exposure to airborne asbestos and the development of asbestosis. There is also a substantial body of expert opinion which supports

the premise that there is a dose-response relationship between exposure to most, if not all, carcinogens and the development of cancer. There is no reason to believe, from the data available to us, that asbestos is an exception to this generality; although, at this time, no one definitely can say at what exposure level asbestos becomes a cancer hazard to man.

Our review of the literature indicates that no credible epidemiological studies have been published which would suggest an excess of malignant tumors among persons exposed to no more than 2 asbestos fibers per cc of air (TWA), using the prescribed membrane filter test method. This is a fact simply because there have yet been identified for study no populations the exposure experience of which consistently has been as low as 2 fibers. Since all populations studied to date have been exposed to substantially higher concentrations of airborne asbestos, we can conclude only that an excess of all types of asbestos disease is associated with levels of exposure significantly higher than the level currently mandated to become effective on July 1, 1976.

Technological Feasibility and Economic Impact Study

For convenience, the Weston study has divided the U.S. asbestos industry into three sectors or segments:

(a) "primary" - employers who receive, store, handle and process raw asbestos fiber.

(b) "secondary" - employers who receive, store, handle and process products or materials containing asbestos, and

(c) "consumer" - employers who use products or materials containing asbestos.

The following conclusions concerning the different segments of the asbestos industry may be drawn from the Weston report:

1. Of the fiber counts obtained from the primary segment, less than 50% are at or below 2 fibers/cc TWA, while more than 50% are above that level.

2. Fiber counts obtained from that portion of the secondary segment subject to the proposed regulation (construction excluded) frequently are above 2 fibers/cc TWA, but data from which a percentage above that level can be calculated are not available.

3. Although fiber counts are not available for the consumer segment, it is reasonable to assume that fiber levels in these workplaces are today less than 0.5 fiber/cc TWA, because they simply use but do not fabricate or otherwise alter asbestos materials.

4. Using best available technology (hereinafter BAT), within three to five years the primary sector can meet a 2 fibers/cc TWA standard, emergencies excepted.

5. Using BAT, the secondary sector also can meet the 2 fibers/cc TWA standard, emergencies excepted, although achievement of this level of control may take more time in this sector than in the primary sector.

6. The cost of installing BAT dust control in the primary and secondary sectors will be substantial, but we believe that it can be financed with tolerable impact upon the selling prices of the products of both sectors.

7. Because it already operates at low airborne fiber levels, the consumer sector need make no expenditures for engineering controls.

8. Although an airborne concentration of 0.5 fiber/cc TWA can be achieved at some process steps; a uniform, across-the-board standard of 0.5 fiber/cc TWA is technically feasible neither for the primary nor for the secondary sector. (Since BAT dust control has been widely adopted among representative manufacturers in the United States and abroad and therefore can be observed in operation; it can be stated as a fact that an 0.5 fiber/cc TWA level of control is not feasible in the primary or secondary sectors.)

9. For the industry as a whole, under the regulation as proposed, a major portion of the annual cost of compliance will be that for the industrial hygiene and medical program; and that burden will be heaviest in the secondary and consumer segments of the industry.

10. The inherent inaccuracies of the membrane filter test method raise questions concerning its suitability as an enforcement tool.

11. The extent of the environmental monitoring (dust counts) mandated by the proposed regulation will strain the capacity of qualified laboratory facilities and may not be an appropriate use of these limited resources.

12. Implementation of the proposed standard may have a severe economic impact upon the asbestos textile and friction products industries, leading to erosion of profit margins, loss of markets and, perhaps, loss of jobs.

PRIMARY RECOMMENDATION

The asbestos industry has been handicapped in its effort.. to comment upon this OSHA proposal for regulation of asbestos exposures in the factory by reason of the fact that it could not simultaneously study that counterpart regulation which OSHA has said it will issue pertaining to the regulation of asbestos exposures in construction. Since approximately 70% of the asbestos fiber tonnage consumed by U.S. manufacturers is incorporated into products destined for construction, the construction industry is a major market for the output of asbestos manufacturers. It is not possible adequately to analyze the impact, upon U.S. asbestos products manufacturers, of the asbestos fiber hazard control program in toto without at least attempting to calculate the effect of the proposed construction regulation upon the markets of the manufacturing companies. It would be a Pyrrhic victory to achieve a viable manufacturing regulation, only to discover that the construction regulation thereafter so threatened or damaged the manufacturers' markets that they could not continue to operate profitably.

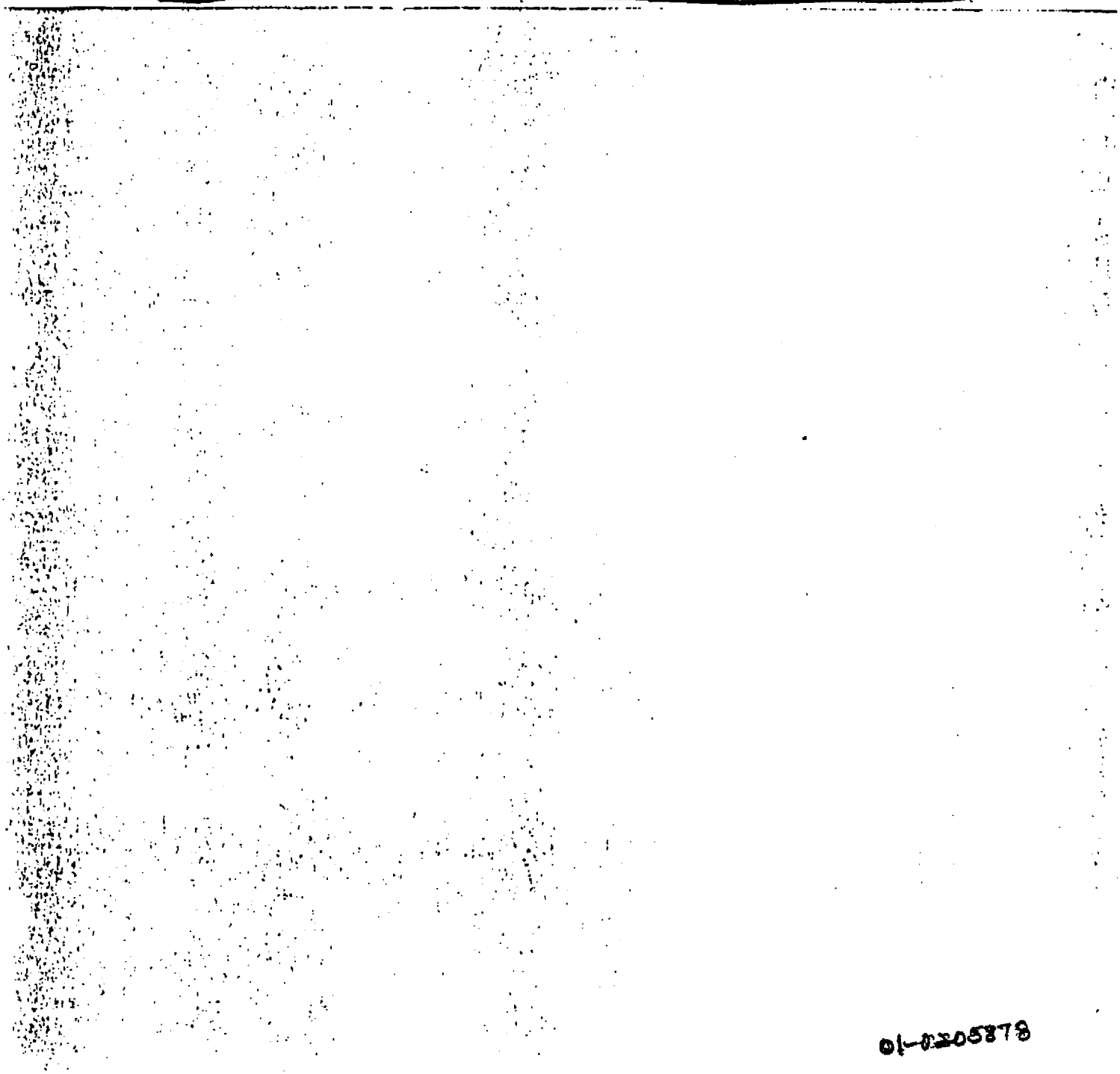
It, therefore, is our primary recommendation that OSHA defer action on this proposed manufacturing regulation until after the proposed construction regulation has been published and its potential impact measured. If, however, that be not possible; we invite attention to the comments upon and objections to the proposed manufacturing regulation which follow.

Although some health scientists speculate that variations in man's susceptibility to cancer-causing agents may be great and that, therefore, the level of tolerance of some individuals to these substances may be virtually zero (the "one-hit" hypothesis); other health scientists argue that the range of variations in the individual susceptibility of man is small and has been found to be far less significant in the etiology of cancer than the level, duration or

frequency of exposure to carcinogens. They point to the great number of carcinogens and suspected carcinogens in the environment (many of them occurring naturally), their ubiquitousness, the fact that some of them actually are essential to life and that some even are produced in the body itself; and they then conclude that the human organism must be able to tolerate finite levels of these substances. This second group of experts asserts that acceptance of the "one-hit" or zero tolerance hypothesis is tantamount to placing an infinite value on the elimination of the last vestige of controllable environmental cancer risk, while placing no value whatever on the possible benefits to be obtained from the presence or use of many carcinogens and suspected carcinogens. The asbestos industry maintains that it is better public policy responsibly to postulate a tolerance level for suspected or acknowledged environmental carcinogens, pending definite knowledge of a true level of tolerance, and to legislate to that level, than it is to pay the geometrically escalating cost of attempting to approach zero exposure. This is particularly true of a useful substance like asbestos, a substance which itself contributes much to health and safety. At some point in the increasingly difficult and expensive process of lowering the levels of asbestos fiber in the general or factory environment, the reduced risk of tolerating the smaller remaining quantities of asbestos fiber in the air becomes less than the increasing risk of losing asbestos and asbestos products to those uses pertinent to health and safety for which they are so well suited. In seeking to control exposures to environmental carcinogens, the proper point of departure for

regulatory policy ought to be a reasonably safe estimate, based upon the best available evidence, of the levels of the substances which man can tolerate and not the adoption of an unsubstantiated theory like the "one-hit" or zero tolerance hypothesis.)

The record shows that the proceedings which led to the adoption



The cost of installing BAT will not be insubstantial, but indications are that, for the larger part of the industry, the annual cost of achieving the 2 fiber level can be added to the cost of products sold without significant adverse impact upon market position. Exceptions to this generality may be the asbestos textile and friction products industries, as well as certain portions of the secondary industry segment; since, in these areas, aggressive foreign competition may deprive domestic producers of opportunities for price relief or may extend the already marked penetration of foreign

goods into the U.S. market. Imposition of the 2 fiber standard upon these domestic manufacturers will create a real economic burden, a burden which may have unfortunate consequences in the erosion of investment values and loss of jobs. It is worthy of note, at this juncture, that the risk of economic damage to all factors in the industry, which may result from the cost of installing BAT, may be lessened by lightening other compliance cost burdens (i.e., in the areas of industrial hygiene and medical examinations).

* Our study of the asbestos industry indicates that an exposure standard of 0.5 fiber/cc TWA, with a ceiling of 5 fibers/cc is not feasible technically.)

Finally, the effects of past government action must be considered. Since June of 1972 the asbestos industry has proceeded in good faith with capital expenditures, work practice changes and employee training in the belief that the permanent exposure standard was to be 2 fibers/cc TWA. If the standard had been set at a lower level in 1972, some employers might have abandoned portions of their businesses and elected not to take costly steps toward compliance. Industry has acted in reliance upon the promulgation of the 2 fiber standard. Of course, we recognize that government must be free to shift position in light of changing circumstances, but the change of circumstances must be valid and significant. Since there is no new evidence to indicate that the 2 fiber/cc TWA standard adopted in 1972 does not adequately protect the health of the working population, it would be grossly inequitable and a denial of due process to lower the standard at this time. The successful conduct of business requires a reasonably predictable political and economic environment; good government practices consistency and avoids abrupt changes in policy unless absolutely necessary.

(Extensive experience with the membrane filter test method, particularly since the 1972 asbestos regulation was adopted, has demonstrated its weakness. As the levels of airborne fibers to be measured decrease, a reasonable degree of statistical accuracy (i.e. ± 10%) can be maintained only by extending the sampling time or increasing the number of microscopic fields to be counted, or both. Of course, these modifications of the testing procedure increase the time required for its accomplishment and increase its cost. At low fiber concentrations the test becomes cumbersome and impractical to use for routine environmental monitoring. In addition, if sampling time is extended in the kind of mixed dust environment which frequently is encountered in industrial situations, the filter may be blinded by non-asbestos particles so that the asbestos fibers cannot be counted. Because of these problems, it is our view that to mandate the use of the membrane filter test method as an enforcement tool at a fiber concentration less than 2 fibers/cc TWA would be inequitable and questionable as a matter of due process.)

MEDICAL SURVEILLANCE

The OSHA proposal, and the current regulation as well, if strictly enforced, would require medical examinations for virtually all industrial, and a large percentage of all commercial and service employees in the U.S. Since asbestos materials probably are present in every, or almost every, workplace and may under some conceivable circumstance release an asbestos fiber or fibers, there will be few workplaces where "employees (may not be) exposed to airborne concentrations of asbestos fibers". It is probable that OSHA did not intend that medical examinations be given to so many people, including large numbers of persons whose chances of exposure to harmful levels of airborne asbestos are nil. Nevertheless, the proposal is very broadly written.

Our survey of the asbestos industry indicates that combined industrial hygiene and medical costs are the most burdensome portion, financially, of the entire proposal. Wherever they can be reduced, without a negative impact upon the important objectives of the regulation, they should be so reduced. This will mitigate the inflationary impact of the entire asbestos hazard control program and avoid disruption of

the industry. In addition, a logical ordering of national health priorities would seem to require that scarce medical resources be devoted to the examination of persons rationally believed to be in danger of damage to their health. And finally, X-ray exposure itself may be harmful, so the procedure should be used only on persons who reasonably might expect to benefit from it. The asbestos industry recommends, therefore, that physical examinations be required only for persons regularly exposed to airborne asbestos fibers in excess of the prescribed standards.