ASBESTOS INFORMATION ASSOCIATION
NORTH AMERICA
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Response to Consumer Product Safety Commission on petition by Natural Resources Defense Council, Inc. and Consumers Union of U.S.A., Inc. for the Promulgation of Rule Declaring Certain Patching Compounds to be Banned Hazardous Substances, dated July 15, 1976.

30 August 1976

PLAINTIFF'S EXHIBIT
UC-5194

I INTRODUCTION

On July 15, 1976, a petition was filed by the Natural Resources Defense Council, Inc. (NRDC) and Consumers Union of U.S.A., Inc. with the Consumer Product Safety Commission pursuant to paragraph 2 of the Federal Hazardous Substances Act, 15 U.S.C. paragraph 1261 (1974) requesting that consumer patching compounds containing asbestos be banned as hazardous substances. Patching compounds were indicated to include taping, spackling and joint sealing and joint sealing compounds. The petition alleged that continued use of these compounds ". . . will result in a significantly higher incidence of cancer (including lung cancer and mesothelioma)" and "that no cautionary label would adequately protect the public from the risk of illness associated with patching compounds."

The Asbestos Information Association/North America is an association of 32 producers of asbestos and asbestos containing products. Members of the Association are directly affected by the petition and wish to enter this response into the record.

II USE OF ASBESTOS IN PATCHING COMPOUNDS

Composition of Drywall Compounds

The petitioners note correctly that the principal use of patching compounds by consumers is in home drywall construction and repair. This discussion therefore will focus on the material generally used for the application, tape-joint compound (TJC).

There are two principal types of join compound. One uses a latex or water-soluble glue as a binder and "sets" by evaporation of the water. The other uses dehydrated gypsum as the binder(and the principal dry ingredient), or gypsum in combination with water soluble binders, and sets by chemical reaction as the gypsum combines with water of hydration. The evaporative type, composed mainly of limestone, lesser amounts of mica and 3-5 percent asbestos plus the binder, controls about 80 percent of the market, and usually is sold in the ready-mixed, wet form. The hydrating type (gypsum-based), with roughly 20 percent of the market, also typically contains asbestos and must, of course, be sold dry and mixed just before use.

Asbestos is added to these compounds for two principal reasons:

1. It imparts properties to the compound (mud) which make it flow easily and smoothly when trowelled on, while still remaining viscous enough to stay in place during the initial stages of hardening.

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It also is appropriate to examine the significance of the quart of compound cited in the petition as the typical purchase size. A quart of ready-mix compound weighs a little over three pounds and will finish about 45 square feet of drywall. This is less than two of the standard size 4' X 8' gypsum board sheets and appears to be a reasonable quantity for the usual do-it-yourself craftsman.

Most of the packaging and distribution of products to the consumer market is done by one or two of the large building products companies, several larger companies that specialize in the consumer tape joint compound field, and a substantial proportion of the major paint manufacturers who market through their own distribution outlets. The medium to large regional manufacturing companies which have a substantial share of the commercial TJC busines generally are not involved. Consumer TJC is distinguishable from commercial TJC in that the consumer product finally passes into and through mass distribution retail outlets.

The question of container size is particularly relevant to the issue raised by the petition. TJC for retail distribution typically is packaged either in a one gallon container of the wet type or in a one pound or five pound package of the dry type. The largest clearly identified consumer product found in our brief survey, was a kit containing 18 lbs. of wet compound plus tape which was intended for use in the installation of 250 sq. ft. area, i.e., a small room. Some large retail stores, however, stock limited quantities of commercial 5 gallon pails for the convenience of the smaller commerical contractor. While it is conceivable that a home-craftsman might purchase one of these 5 gallon pails, it would be a rare home repairman who would undertake a complete three room finishing job. Ready-mix compound intended for commercial use, by contrast, universally is packaged either in 5 gallon pails (62.5 lbs.) or in 50 lb. polyethylene bags in cardboard boxes. Dry-mix compound is packaged in 25 lb. bags which yield approximately 50 lbs. of compound when water is added. If these commercial containers are ju to be ". . . packaged in a form suitable for use in the household" the ban requested by the petitioners will apply, not just to the cons market (5% of the total), but to the entire market, commercial as well as consumer.

III ASBESTOS EXPOSURE DURING DRYWALL INSTALLATION

The petitioners do not provide any data which show the level of exposure that occurs during use of the compounds at a scale and under conditions likely in consumer use. The only data presented is that of Rohl et al (Reference 7) obtained during a test performed at one location by commercial drywall workers. Materials were handled on a much larger scale than that which must be considered here. Exposures recorded were high, and it is alleged that exposures in consumer use would be similar.

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The concentrations described above all were ceiling concentrations obtained during sanding operations. In most cases even commercial operators do not sand for an entire shift so that the 8-hour time weighted average exposure will be considerably less. TWA values for the study cited (1) are shown in the table below:

SUMMARY OF AIRBORNE ASBESTOS
Fiber Concentrations During Drywall Sanding

Location	Ceiling Exposure (Fibers/cc > 5um)	Exposure Time During Sanding (Hours)	Estimated 8-hour TWA Expos (Fibers/cc
New York City, N.Y.	0.4	8.0	0.3
Hialeah, FL	1.0	4.0	0.4
Ft. Lauderdale, FL (Hand)	1.1	1.0	0.1
Detroit, MI	1.3	8.0	0.9
Dallas, TX	1.8	0.5	0.1
Ft. Lauderdale, (Pole)	3.4	3.3	0.6
Niagara Falls, N.Y.	3.6	0.6	0.2

It is our contention that these lower values are much more representative of exposure during commercial operations than those cited by the petitioners. It is also our contention that, because smaller quantities are handled, peak consumer exposures generally will be no greater than the commercial ceiling exposures recorded above. And, since consumers work with tape joint compound infrequently, average or TWA exposures for consumers will be much lower than for commercial operators.

IV THE MEDICAL EVIDENCE

Petitioners cite, in support of their position, a selection of pieces from the medical, scientific and popular literature, some of which items are of questionable value in furthering the regulatory process. Because time does not permit a detailed analysis of each reference cited, we can only offer a few cautionary considerations to be borne in mind when studying the petition:

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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 view 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 presecribed 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."

Johns-Manville Corporation, the largest producer of fiber in the western world and the largest manufacturer of asbestos-containing products in the United States, also conducted a detailed medical review and the following conclusions were included in their statement to OSHA. Exhibits B and C from the Johns-Manville response are attached hereto for reference.

From page 4:

"2. J-M's Review of the Medical References Cited By OSHA

We have reviewed in considerable detail all of the references cited by OSHA, and conclude from this study that these references totally fail to provide

"B. Criteria in Human Studies

Types of evidence suggesting that an agent is carcinogenic in humans include: neoplastic response directly related to exposure (both duration and dose), incidence and mortality differences related to occupational exposure; incidence and mortality differences between geographic regions related to difference exposures rather than genetic differences and/or altered incidence in migrant populations; time trends in incidence or mortality related to either the introduction or removal of a specific agent from the environment; case control studies; and the results of retrospective-prospective and prospective studies of the consequences of human exposure. Clinical case reports may also provide early warning of a potential carcinogen. Negative epidemiologic data may not establish the safety of suspected materials. Negative data on a given agent obtained from extensive epidemiologic studies of sufficient duration are useful for indicating upper limits for the rate at which a specific type of exposure to that agent could affect the incidence and/or mortality of specific human cancers (Emphasis added.) "

"E. Extrapolation from Experimental Data and Evaluation of Human Risks

The criteria listed above provide a guide to determining whether a compound is carcinogenic under a specific set of exposure conditions in a given species or subpopulation. Quantitative extrapolation from animal studies for the purposes of evaluating human risks entails large uncertaintie at the present time. Each case must be individually evaluated, taking into consideration such factors as adequacy of experimental design, statistical significance of the data, dose-response relations, duration of exposure , route of administration, metabolism (including species variations) host susceptibility, co-factors and other modifying factors, and the amount of the material to which humans will be exposed. The criteria for extrapolation may vary depending on the agent in question. (Emphasis added.)".

The National Cancer Institute report does not appear to support the OSHA position that the concept of a "no effect" or "threshold level" may have little real significance.

V STATEMENT OF POSITION A20031

For the reasons cited above, it is the position of the AIA/NA that:

1. Because consumers use tape joint compounds in small quantities and at infrequent intervals, the levels of airborne asbestos to which consumers will be

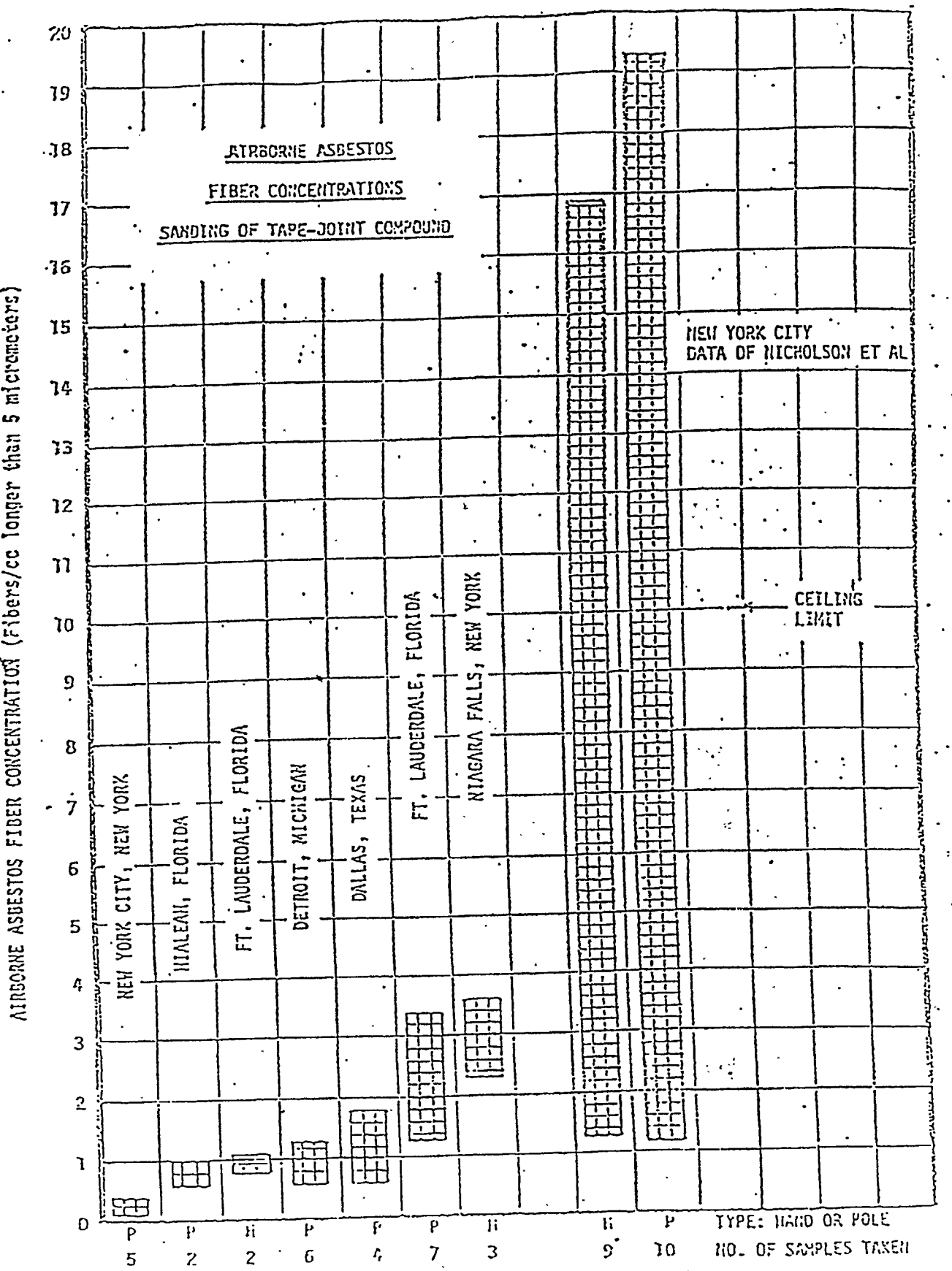


Figure 1

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