Report of SubCommittee on Outdoor Asbestos

(as amended by Dr. H. C. Lewinsohn)

The risk to persons (occupational and para-occupational) exposed to asbestos fibers has been adequately documented. The risk to public health associated with exposure to asbestos has not been clearly defined. In outdoor exposure the subcommittee has focused its attention on the problems of exposure to asbestos: 1) in the vicinity of plants which use asbestos; 2) at toll plazas where asbestos emissions from it's brake lining decomposition may add to the background fiber count, and 3) at demolition sites where airborne fibers potentially briefly expose the public, as well as the construction worker to levels of asbestos greater than the normal background level. In all instances the exposure is thousands of times less than used to exist in industry before controls were introduced. The present OSHA asbestos standard of two fibers per millileter permits workers to be exposed to concentrations which are of magnitudes greater than any levels which have thus far been measured in the ambient air.

The questions which the subcommittee studied were: 1) what guidelines should be established for industry to control emissions from manufacturin and processing asbestos, and 2) what recommendations should be made to the legislature for statutory action. Clearly the most difficult decision for the subcommittee was whether the state should establish a measurable ambient air standard for asbestos. The subcommittee is in agreement with the total committee that the ideal situation is to have no unnecessary exposure and that uncontrolled usage is unacceptable when dealing with this potential health hazard. The enforcement of an ambient air standard is much more difficult to accomplish than the enforcement of standards in the workplace or inside public and private buildings.

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The solution, as we see it, is to develop a numerical benchmark for outdoor quality and, further, to delineate a state program for its development through cooperation between the Department of Health Services, the Department of Environmental Protection (Air Compliance Unit) and citizens involved in Connecticut's industries.

RECOMMENDATIONS:

I. Air Quality Guidelines

The state shall not establish an air quality standard at the present time.

Rather than establishing standards through regulation, the D. E. P. should work cooperatively with industry to develop techniques for controlling airborne asbestos emissions. Air Compliance Unit of D. E. P. should establish a monitoring network in collaboration with industry, the University of Connecticut and Yale University to develop the techniques required for measuring airborne levels of asbestos which would enable a meaningful and enforceable ambient air standard to be developed. Sampling should be ongoing. The state should contract with an academic institution in Connecticut which has the necessary expertise to do the testing.

Costs for D. E. P. to monitor _____

Costs for testing _____

The D. E. P. in the meantime should require industry to implement the best available control technology possible, and get approval from Air Compliance Unit for their Compliance Plans.

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II. Licensing of Asbestos Contractors

In order to educate workers to the hazards and to assure training of employees for dealing with the substance, the state should establish a licensing procedure under the Department of Health Services. This will entail the establishment of a Connecticut Board of Examiners for Asbestos Contractors. The D.H.S. shall oversee the operation of said board in keeping with P.A. 484.

The purpose of the licensing shall be to assure appropriate education of contractors and their workers to the hazards of asbestos exposure in construction and demolition; to assure knowledge of OSHA and EPA standards; to assure training of employees in the proper techniques to be used in dealing with asbestos regarding the proper disposal of the material in keeping with EPA guidelines and, finally, to guarantee that contractors record in the local land records the location of dumping sites.

The cost to the Department of Health Services for the training program shall be covered by the licensing fee. Penalties for violation shall include a first-time fine and then the loss of license.

III. Toll Booths

Reaffirming our commitment to the principle that uncontrollable emission of pollutants into the ambient air gives cause for concern, noting the fact that auto emissions may also include minute quantities of asbestos fiber we recommend immediate action be taken to make all toll plazas in Connecticut one way. This will have the effect of lessening the total pollutant levels at all toll plazas. Both the Merritt Parkway and the Connecticut Turnpike should be addressed with an eye to total removal at a later date.

Brake linings and clutch facings are friction products which may contain asbestos and can release small amounts of asbestos fibers as they are used. In 1973 Jacko et al studied the composition of various friction materials incorporated in American automobiles and tested these vehicles on the roads of Detroit. Utilizing results of their experiments it is possible to estimate that if two million vehicles were registered in Connecticut in 1973, approximately 3,000 pounds of asbestos would have been consumed by them, of which approximately 4% could have become airborne; 80% could have been deposited and the remainder would have been contained within the worn brakes. Another study in 1973 by A. E. Andersen indicated that less than 0.02% of the asbestos in brake lining became airborne during use.

Conditions have changed since 1973 and brake linings have been adapted accordingly. The need to conserve fuel has resulted in an increase in the number of smaller cars on the roads. Smaller cars have heavier duty requirements on friction materials particularly with the use of front wheel drive. The semi-metallic content of disc brakes has increased in the front brakes whereas the rear brakes have become lighter and smaller. These changes in design may mean a much lower emission of airborne asbestos fibers than those calculated seven years ago in 1973.

The amount of asbestos released from normal vehicle breaking does not appear to add very significantly to the level in the environment although a study in Connecticut may indicate a small increase at certain toll plazas, particularly one which is also located in the vicinity of an asbestos friction materials plant. These measurements were made at a time when all vehicles used asbestos contained brakes

linings and may no longer reflect the position in Connecticut. It is for this reason that we have singled out that particular situation for correction. We believe it is particularly helpful that a means to lessen asbestos emission, which is straight forward and cost effective, exist. Although it is unclear as to whether present day conditions and motor vehicle usage produce any increase in asbestos concentrations in the environment, we nevertheless believe that it would be valuable to reduce any vehicle braking and acceleration such as toll plazas necessitate in order to control the automobile emissions in general.

Other ideas which the subcommittee discussed included the requirement that all demolition projects require a permit. Because of the alleged cost of such a program and because of the potential for bureaucratic red tape, the sucomittee is not pressing for the implementation of this proposal at this time. Nonetheless, we recommend reconsideration of such an approach after a specified testing period once the licensing program is in place. It is our hope that, with a cooperation program between government and industry and, with a well organized licensing program which emphasizes education of the contractor and his employees, we may be able to do the job without further government intrusion.