



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

62036  
N<sub>1</sub>-54(2)  
COMM

Canadian Embassy  
1746 Massachusetts Ave., N.W.  
Washington, D.C. 20036-1985

As per request  
Paul Laffleur  
Counsellor (Commercial)

(2)  
N<sub>1</sub>-054(02)

Tel: 785-1400

**SCIENTIFIC COMMUNITY UNANIMOUS IN DENOUNCING  
THE BANNING OF ASBESTOS  
AS FORMULATED IN THE EPA'S PROPOSED RULES**

Montreal, April 22, 1986. - The scientific community is shocked by the methodology used by the U.S. Environmental Protection Agency (EPA) in recommending a total ban on asbestos in the United States. The EPA recommendation is at odds with the findings of the most recent scientific studies on the subject. In addition, the substitute products suggested by the EPA could involve new, as yet unknown health hazards.

These conclusions are derived from analyses done on the EPA document by 12 researchers from Canada, the United States, France and Great Britain. Their reports were made public today by the Asbestos Institute during information briefing devoted to a review of the EPA's proposal to ban asbestos.

The scientists consulted by the Institute include university researchers and professors, epidemiologists, toxicologists and specialists in biostatistics, biomathematics and environmental sciences. All are highly regarded for their work on the biological effects of asbestos.

**A suspect scientific basis**

The experts' initial observations dealt with the scientific data cited by the EPA to support its proposal. They are unanimous in stating that the report of the American agency contains major deficiencies from both the scientific and methodological viewpoints.

Thus, Drs. J. Corbett McDonald and Alison A. McDonald of Montreal's McGill University feel that the authors of the EPA report "have in fact presented a 'worst estimate' of the risk by citation of selected and biased evidence".

Professor Alain-Jacques Valleron and Dr. Guy Thomas, both associated with the Université de Paris VII, say that the EPA

report does not meet any of the universally recognized scientific standards and that "using the conclusions of this type of report for regulation purposes would seem to be abusive".

### **"Crude guesimates"**

Professor Jack Siemiatycki of Montreal's Armand-Frappier Institute asserts that "the estimate of risk by the EPA is based on crude 'guesimate'. In this light, the Montreal epidemiologist says, "the proposed ban on asbestos would be something of an expensive gamble".

In a highly detailed analysis of the EPA document, Professor Arthur M. Langer, associate director of the Mount Sinai Medical Center's Environmental Sciences Laboratory in New York, points out that the environmental data used to support the agency's position "are not that good". Notes Dr. Langer: "The statement that asbestos has been studied most often and 'thoroughly' for its effect on humans suggests to the reader that these data are unassailable. This is simply not the case."

### **"Obscure references"**

Doctor John C. Gilson, who until recently was director of the Medical Research Center of the Pneumoconiosis Unit in Penarth, Great Britain, believes that "the EPA has not made a convincing case for banning all asbestos". Finally, professor Patrick Sébastien of McGill University's Occupational Health Department agrees with virtually all of the specialists consulted, who have pointed out that the report of the American agency contradicts the majority of the most extensive studies carried out on this subject around the world. Professor Sébastien deplores the fact that the scientific references in the document "come from obscure studies".

### **Different types of asbestos**

In their evaluation of the EPA report, the experts are unanimous in criticizing the EPA for not making a distinction between the various types of asbestos.

For Dr. J.M.A. Davis, head of the Pathology Department of the Edinburgh Institute of Occupational Medicine in Great Britain, this approach "ignores a vast amount of epidemiological evidence that chrysotile is a much safer material than the amphiboles".

In the same vein, the McDonalds reject the idea that all fibres have the same biological effects and confirm that this postulate "is at odds with majority scientific opinion throughout the world".

Professor Langer, who also disagrees with the EPA's attempt to group all types of asbestos together, believes that "chrysotile asbestos should be permitted in the manufacture of vinyl asbestos tiles, friction products and asbestos cement pipe". The New York scientist, who emphasizes that the use of chrysotile asbestos must be subject to rigorous controls in the work environment, is nonetheless in favour of banning crocidolite and amosite.

### **The dangers of substitution**

The EPA proposal to systematically replace asbestos with various substitute products is unanimously criticized by the 12 experts consulted.

For example, Professor F.D.K. Liddell, of McGill University's Epidemiology and Biostatistics Department, finds no justification for the EPA's numerous assertions that the replacement products would be safer than asbestos. "Using market forces to encourage the more rapid development of substitutes is hardly a guarantee of the safety of the substitutes".

Dr. Raymond Bégin, head of the Pneumology Department of the University of Sherbrooke's Hospital Centre, points out that the biological effects of the substitutes proposed by the EPA have not yet been adequately evaluated and that "several of these materials may well be at least as biologically active as asbestos".

Professor Siemiatycki says the theory that substitute products would pose less risk than asbestos "may not stand up to scrutiny". Professor Siemiatycki also noted that "studies of workers exposed to man-made mineral fibres in the U.S. and in Europe may be interpreted as showing risks of lung cancer comparable to those seen with asbestos."

According to Dr. Davis of Great Britain, "present knowledge suggests that any fibrous product that has fibres of the same dimensions as asbestos and the same fibre durability in lung tissue will be equally hazardous."

### Potentially carcinogenic products

Professor Langer of the Mount Sinai School of Medicine, who has analyzed the preliminary tests carried out on a half-dozen products proposed as replacements for asbestos, points out that these tests have shown that the products in question are potentially carcinogenic.

Professor Sébastien believes that "it is unwise in terms of public health to propose several mineral fibres to replace asbestos in its multiple uses. In fact, that would only compound a variety of uses with a variety of pollutants, making the situation even more difficult to control, both on the level of industrial hygiene and of the environment."

Because of the many uncertainties involved in the use of substitute products, the experts recommend that these products be subject to regulations and standards that are as strict as those imposed on asbestos.

### A questionable cost/benefit ratio

Although not all of the experts touched on the EPA's analysis of the cost/benefit ratio in banning asbestos, those who have examined it generally tend to question its validity.

Dr. Gilson feels that the EPA has not provided sufficient information to establish the cost elements: "The EPA give us no information on the reliance to be placed on the cost figures". According to the McDonalds, to claim that preventing cancer deaths saves money is almost certainly untrue: "If economic arguments are used, they should be correct."

The McDonalds point out that "several asbestos products are primarily concerned with safety. Does EPA have the authority to require that alternative products meet precisely the same specifications or better? If not, the proposed rules could have a net adverse effect on health."

In the opinion of Professor Liddell, the cost of replacing asbestos is "astonishing". According to the method of calculation used by the EPA, this would involve an investment of \$2 billion to prevent 1,000 fatal cancers, or \$2 million for each case.

Professor Siemiatycki feels that the price they want the American public to pay is disproportionate to the results they hope to achieve: "From a public health viewpoint, more lives and years might be saved by investing in anti-smoking campaigns, anti-alcohol campaigns, transportation safety or other public measures."

#### **Controlled use of asbestos**

Along with many of his colleagues, Professor Langer rejects the notion of banning asbestos as proposed by the EPA: "Can a resolution be achieved to protect the general population and still use asbestos safely? I think yes. By elimination of amphibole asbestos, banning of cigarette smoking in specified buildings, structures, and workplaces, workplace controls and workpractices, and use of safe substitutes, this can be achieved."

Dr. Robert Murray of the London School of Hygiene and Tropical Medicine in London, England, who is also president of the International Association of Occupational Medicine, finds that the EPA proposal is an unjustified action "which borders on almost obsessive paranoia". Noting that society has learned how to control many dangerous industrial substances such as phosphorous and carbon bisulphite without having to ban them, Dr. Murray suggests adopting a similar approach to asbestos, "whose risks can be controlled".

- 30 -

Information: Intercommunica Inc.  
(514) 288-9120



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

## PROF. ALAIN-JACQUES VALLERON AND DR. GUY THOMAS CRITICIZE THE EPA FOR BREAKING UNIVERSALLY-RECOGNIZED SCIENTIFIC RULES.

Prof. Alain-Jacques Valleron teaches biomathematics and biostatistics at the University of Paris VII (Jussieu.) He is also coordinating manager of INSERN, France's national health and medical research institute.

Dr. Guy Thomas is a physician at the Paris Poison Control Centre and at the Lariboisière-Saint-Louis University Medical Centre affiliated with the University of Paris VII.

Professor Alain-Jacques Valleron and Dr. Guy Thomas, both affiliated with the University of Paris VII, criticize the EPA study for breaking universally-recognized scientific rules. After an assessment of the methodology used by the American agency, they conclude that using the conclusions of this kind of report for regulatory purposes seems abusive.

### **Questionable Cost/Benefit Analysis**

Prof. Valleron and Dr. Thomas challenge the estimated cost of substituting new materials for asbestos as arrived at by the EPA. They specifically note the fact that the health risks of substitute products are not taken into account. They further add that the lower

2.

reliability of replacement products could lead to a rash of accidents.

The French researchers also take issue with the EPA's evaluation of the benefits that could result from a ban on asbestos. They think that these conclusions should be based on a precise assessment of worker and public exposure to asbestos. Prof. Valleron and Dr. Thomas point out that the study of data collected in the past creates virtually insurmountable methodological problems.

#### **An Uncertain Scientific Procedure**

They explain that the problem stems from a lack of uniformity in the methods used to collect data, with some old studies measuring solid airborne particles while more recent studies directly count the fibres. The authors think therefore that the results should be expressed in terms of order of magnitude or large confidence intervals rather than in precise figures.

Prof. Valleron and Dr. Thomas emphasize that the EPA's procedure involves a number of scientific uncertainties. They especially challenge the parameters of the risk-exposure equations used by the Agency because these are calculated on the basis of insufficient data and crudely estimated. Another of their criticisms is that the American analysis does not take the physical characteristics of fibres into account. They also fear that the models used and simplifivative hypotheses which they contain can sometimes be incompatible with the basic data available.

Prof. Valleron and Dr. Thomas conclude: "The major deficiencies of the EPA report are its complete failure to discuss the results in terms of their uncertain nature and its failure to synthesize published works."



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUÉ

## PROFESSOR SIEMIATYCKI OBJECTS TO THE MODEL USED IN THE EPA'S ANALYSIS

Professor Jack Siemiatycki is both a researcher and a teacher at the Armand-Frappier Institute of Montreal

### A Questionable Analytical Model

Professor Siemiatycki of the Institut Armand Frappier criticizes the mathematical model of the "linear non-threshold dose/response" type used by the EPA. He thinks that the American agency never proved that this was the most coherent model available.

The Montreal researcher criticizes the specific parameters of the model selected because they are based on measurements conducted among a single group of workers in the 1960's. Since the data used contain no individual measurements and are based on an identical average exposure for all workers, Prof. Siemiatycki concludes that the basic parameters of the model constitute only crude approximations.

Moreover, the researcher thinks that the fact of selecting a single model and a single study seems to give the EPA estimates a degree of accuracy which they do not deserve. According to the Institut Armand Frappier epidemiologist, a credible model would express the calculations of risk in terms of order of magnitude. He believes that the parameters for which we have only rough estimates should also be treated the same way.

### **Dubious Scientific Bases**

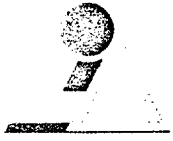
Prof. Siemiatycki blames the EPA for thinking that all types of asbestos are equally harmful, which in his opinion adds yet another element of uncertainty to the validity of the Agency's conclusions. The researcher notes that current knowledge seems to indicate that chrysotile is less hazardous per unit than other types of asbestos.

The American agency states that asbestos is one of the most frequently studied potentially carcinogenic agents and that this confirms the validity of its conclusions. Prof. Siemiatycki says that this statement is tendentious. In most cases, the works cited are retrospective studies of groups of subjects for whom data on the degree of exposure are at best approximate. Most of these studies do not take into account factors such as smoking habits, ethnic origin, or urban and social environment.

### **Costly Speculation**

The epidemiologist concludes that banning asbestos would be a costly speculation. He thinks that the thesis that substitute products are less hazardous would not stand up to an in-depth study. Prof. Siemiatycki notes that American and European studies of workers exposed to synthetic fibres show risks of lung cancer comparable to those of asbestos.

Prof. Siemiatycki calculates that the price to be paid is disproportionate with the results one could hope to obtain. "From the point-of-view of public health, it would be much more profitable to invest in anti-smoking and anti-drinking campaigns, in transportation safety and other community health measures," he writes.



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

## PROFESSOR SÉBASTIEN OPPOSES A POLICY OF REPLACING ASBESTOS WITH LITTLE-KNOWN FIBRES

Professor Patrick Sébastien  
teaches at McGill University's  
School of Occupational Health.

Professor Patrick Sébastien of the School of Occupational Health at McGill University shares the EPA's views on the general problem of controlling exposure to asbestos. He deplores, however, the agency's scientific clumsiness and rejects its proposals for substitutes.

### The Problem of Finding Substitutes

Prof. Sébastien notes first of all that asbestos is a victim of its own technological properties. He points out that most of the arguments mustered against this product stem from a single observation: the different uses of asbestos have multiplied instances of exposure to its fibres and the cumulative effect of these exposures becomes difficult to assess. But what is also difficult to calculate, according to Prof. Sébastien, is the risk to which the substitute products suggested by the EPA would expose the public.

On this subject he writes:

"I have doubts about the harmlessness of substitute mineral fibres, especially rock wool, for which there is epidemiological evidence of carcinogenic action, and ceramic fibres, which have produced cancers in laboratory animals through inhalation. If the EPA wants to ban asbestos in the United States, it should find technological solutions that do not involve other mineral fibres."

Moreover, the idea that several new fibres could be called upon to replace asbestos strikes the doctor as a lack of wisdom. He believes that by multiplying the substitute products, we would only add to the diversity of pollutants and make the situation even more difficult to control.

#### A Lack of Scientific Rigor

In addition to this basic criticism, Prof. Sébastien thinks that the American agency argues its case with a great deal of clumsiness. He accuses it of frequently basing its recommendations on obscure scientific references. Also open to criticism, according to him, are the basic data on pollution levels in the environment, which were obtained by different methods. He maintains that some techniques of measuring fibres in the air were even abused. Dr. Sébastien states that "such practices are morally questionable, contribute nothing to science, and offer no solutions to social problems."

The McGill professor believes that the American agency also drew false conclusions on the subject of the degeneration of plastic-asbestos tiles. He says that there is no systematic study which enables one to conclude that these tiles are the main cause of the level of airborne asbestos fibres in buildings.

3.

Prof. Sébastien concludes:

"It is understandable that an agency such as the EPA should propose a ban on asbestos, even if it argues its case clumsily. However, the agency can be criticized for recommending that asbestos be replaced by several synthetic mineral fibres."

# COMMUNIQUE

## DR. MURRAY SAYS SUBSTITUTE FIBRES PROPOSED BY THE EPA ARE AS DANGEROUS AS ASBESTOS

Dr. Robert Murray is with the London School of Hygiene and Tropical Medicine in London. He is also Chairman of the International Association of Occupational Medicine.

Dr. Robert Murray, of the London School of Hygiene and Tropical Medicine, thinks that a ban on asbestos such as the EPA proposes is an unwarranted act that stems from an almost obsessive paranoia. This physician, who has specialized in occupational diseases related to asbestos since 1947, notes three flaws in the American agency's argument.

### **Dangerous Substitutes**

First, according to Dr. Murray, comes the Agency's failure to ignore the threats posed by other mineral fibres mentioned as possible substitutes for asbestos. He maintains that these fibres, whether natural or synthetic, are as hazardous as asbestos. As a result, if regulations governing asbestos are to be adopted, he hopes that they will also extend to substitute fibres.

### **A Defective Methodology**

The second flaw in the EPA study, according to Dr. Murray, is attributing instances of death to a single cause: asbestos. He argues that the agency systematically ignores other possible contributing factors and

thinks that the importance placed in asbestos is out of proportion: "Sir Richard Doll made the following calculation: if cancer were completely eliminated, life expectancy would be increased by about two years. If asbestos is responsible for as much as 1 or 2% of human cancers, then the increase in life expectancy following its elimination would be six to ten days. It would be much more appropriate to eliminate cigarettes or automobiles, which have a considerably greater impact on the quality and length of life."

Thirdly, Dr. Murray rejects the assertion that "a single fibre can be lethal". He notes that the risks are a function of the type of asbestos fibre and its physical dimensions. Moreover, he maintains that these risks can be controlled. As for the threats posed by asbestos in buildings, the British expert says that he has not found a shred of evidence in the EPA documents to allow that danger to be scientifically defined.

Dr. Murray points out that man has learned to control a number of hazardous industrial substances such as phosphorous or carbon disulfide without having to ban them. He recommends adopting the same positive attitude towards asbestos.



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

**DRS. J.C. AND A.D. McDONALD THINK THE EPA'S PESSIMISTIC ASSESSMENT OF ASBESTOS-RELATED RISKS IS BASED ON EVIDENCE WHICH IS INCOMPLETE AND TAKEN OUT OF CONTEXT.**

Dr. J.C. McDonald teaches at McGill University's School of Occupational Health.

Dr. A.D. McDonald is with the Research Institute on Occupational Health and Safety of Montreal.

## **Questionable Economic Justification**

Drs. McDonald first criticize the EPA's allegedly economic approach. They think it would be almost certainly false to pretend that the prevention of cancer deaths would result in savings. The researchers maintain that it does not at all appear certain that the cost/benefit ratio that would result from replacing asbestos with substitute products would be a favorable one.

On this subject, they write:

"The proposed regulations may create worse conditions for health than those which they were supposed to try to eliminate."

## **Fibre Type and Size**

Both scientists reject the idea that all fibres have the same biological activity. They say this assumption does not agree with current international scientific opinion.

Moreover, they point out that the 500 words which the EPA spends analysing the various types of fibres suggest a flagrant lack of documentation. The researchers criticize the American agency for adopting the same questionable attitude towards the size of fibres. They note that no distinction is drawn between long and short fibres, whereas scientists are unanimous in admitting the importance of this factor.

The EPA bases its conclusions on a certain number of studies that show the dangers of asbestos, but Drs. McDonald accuse it of ignoring many other studies that tend to prove the opposite. As an example, they cite studies of workers in the friction products industry which conclude that there was no increase in the number of cancer cases among the workers studied.

#### **A Questionable Methodology**

They express serious doubts on the validity of the non-threshold linear model which the EPA uses for its analysis. In addition to numerous theoretical arguments, the authors point out that this model has never been proven experimentally.

#### **Dangerous Substitute Products**

The Montreal researchers reject the EPA's notion that no substitute product poses as great a threat to human health as asbestos. Drs. McDonald state that it has been proven that exposure to fibreglass and rock wool creates as great a risk of lung cancer as exposure to asbestos. The authors note that American and European studies also show that synthetic mineral fibres involve serious risks.

3.

They conclude by saying that the EPA lacks scientific evidence to support its recommended ban on asbestos: "Despite arguments to the contrary, the authors have in fact presented a pessimistic assessment of the risk by drawing on evidence that is incomplete or taken out of context. In refusing to admit that the dangers inherent in chrysotile in a controlled environment are probably less than those associated with the replacement products available, the proposed ban may very well increase rather than decrease the dangers to public health."



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

## PROFESSOR LIDDELL DEPLORES THE EPAS'S LACK OF SCIENTIFIC REFERENCES

Dr. F.D.K. Liddell teaches in  
the Epidemiology and Biostatistics  
Department at McGill  
University.

Professor Liddell criticizes the EPA document point-for-point. First of all, he deplores the fact that the American agency begins by stating that it is essential to replace asbestos with little-known products which it considers less dangerous.

### **Lack of Scientific References**

The McGill University professor says that in support of its thesis, the EPA cites figures which are not backed up by any serious study. As an example, he points to the EPA's assertion that every year, some 3,300 to 12,000 new cases of cancer can be linked to asbestos.

The lack of valid scientific references is a criticism that occurs often in Prof. Liddell's analysis. He regrets the American agency's statement that it used several high-quality epidemiological studies. The Montreal researcher takes the opposite view by saying that very few of those studies merit that particular qualification.

The expert further notes that 11 of the 14 scientific references cited by the EPA come from U.S. government agencies and three from the Mount Sinai School of Medicine. Canadian and European studies have for the most part been left by the wayside.

### **Risky Substitute Products**

Professor Liddell blames the EPA study for ignoring facts that do not support its thesis, as, for instance, in the case of brake linings and other friction products. According to the EPA, these products accounted for 22% of the asbestos market in 1984 and finding a substitute is an urgent matter. The McGill professor accuses the U.S. agency for hiding the fact that all studies of workers who come into contact with these products tend to prove that their cancer rate is no higher than average.

Professor Liddell sees little justification for the EPA's repeated statement that replacement products would be safer than asbestos. Its assertions concerning the low risk of these products suggest, to the expert, excessive optimism. The EPA says that it wants to let market forces spark the development of new substitutes. Professor Liddell points out that this approach does nothing to guarantee the development of products that would be safer than asbestos.

### **Asbestos and Cancer**

The researcher maintains that the link between asbestos and cancers of the larynx, pharynx, digestive tract, kidney and ovary seems weak. He thinks that existing research on this subject is rather inconsistent.

While accepting the linear model of dose-relationship with no lower threshold which the EPA uses, Professor Liddell rejects the assertion that asbestos is a factor that compounds the risks underlying lung cancer caused by smoking. He says that he knows of only one study that shows this relationship and it has serious shortcomings.

3.

The cost of replacing asbestos also strikes the Montreal researcher as exorbitant. The EPA itself estimates that a two billion dollar investment would be required to avoid 1,000 fatal cancers, meaning \$2 million for each case.

As for the EPA's general conclusion that there is no safe level of exposure to asbestos, Professor Liddell writes: "I do not believe that there are many arguments with enough support to incriminate asbestos convincingly."



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

## PROFESSOR LANGER ASKS THE EPA TO DRASTICALLY AMEND ITS PROPOSAL TO BAN ASBESTOS

Professor Arthur M. Langer is associate director of the Environmental Science Laboratory at the Mount Sinai Medical Center in New York.

Professor Arthur M. Langer approves of the EPA's goal. He is asking the Agency, however, to drastically amend its regulatory proposal.

### A Risk Difficult to Assess

The New York researcher starts off by saying that we cannot logically justify a total ban on asbestos solely on the basis of an assessment of the risks this product poses to the health of the general public. He explains that the data from which the risk can be extrapolated to the population as a whole is too scanty to arrive at precise, numerical conclusions. Prof. Langer asks the EPA to stop evaluating the number of deaths that might be caused by asbestos.

The Associate Director of the Environmental Sciences Laboratory wants the problem of asbestos-related diseases to be put in a broader context.

He writes on this subject: "When asbestos mortality is measured against factors such as diet, cigarette smoking alcohol consumption and other "preventable factors" in the environment, one is forced to conclude that control priorities do not appear to be cost-effective. This does not mean we should be opposed to the control of this "preventable" disease. But we should put this problem into perspective."

### **Keep Chrysotile**

Professor Langer formulates several specific recommendations including banning crocidolite and amosite as quickly as possible. On the other hand, he recommends that chrysotile continue to be used in the manufacture of vinyl tiles. He states that there is no solid evidence leading to the conclusion that these products are hazardous to health.

In the case of friction products, the American researcher recommends that the use of chrysotile continue to be authorized. He notes that it would take several years before substitute products could be adequately tested. He estimates that the more than one million vehicles with faulty brakes circulating on American roads are much more dangerous to public health than asbestos.

Professor Langer proposes the establishment of a special agency to regulate the use of all inorganic fibres, whether natural or synthetic, create problems similar to asbestos and should be regulated in the same way. The author maintains half a dozen substitutes which studies have shown can be carcinogenic. Professor Langer fears that many people think a ban on asbestos would end the problem, but that would not be the case.

### **A Social Problem**

The New York researcher states his disagreement with several of the EPA's conclusions. Thus, he severely criticizes the studies which the American agency uses as the basis for its statement that brief exposures to asbestos fibres can perceptibly increase the risk of cancer. He also rejects the notion, put forth by the EPA, that many cases of mesothelioma can be linked to the presence of asbestos in the environment. He thinks that these cancer cases are more likely related to the workplace.

3.

The author frequently deplores the terminology used by the EPA. He cites the concept of "unreasonable risk" which is based on no verifiable data. He thinks it is more a sociological than medical concept. In concluding, Professor Langer considers it socially prudent to reduce the public's exposure to asbestos fibres.

In this regard he writes: "Can a resolution be achieved to protect the general population and still use asbestos "safely"? I think yes. By elimination of amphibole asbestos, banning of cigarette smoking in specified buildings, structures and workplaces, workplace controls and workpractices, and use of safe substitutes, this can be achieved."



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

**DR. GILSON SAYS THAT THE ENVIRONMENTAL THREATS POSED BY  
ASBESTOS ARE SLIGHT -- IN FACT, NEGLIGIBLE.**

Dr. John G. Gilson is former director of the Medical Research Council in the Pneumoconiosis Unit at Penarth in Great Britain.

## **Weakness of the Cost/Benefit Analysis**

Dr. Gilson, former director of the Medical Research Council in the Pneumoconiosis Unit at Penarth in Great Britain, believes that the cost/benefit analysis on which the EPA bases its recommended ban on asbestos lays itself wide open to criticism. He particularly deplores the lack of a detailed breakdown of the \$2 billion figure cited by the Agency.

The British physician also notes that if substitutes prove less effective than asbestos, they may cause deaths whose cost has not been estimated by the American agency. He mentions three types of uses for which this calculation should have been made: fireproof construction materials, asbestos friction materials and asbestos clothing.

## **Uncertain Benefits**

Dr. Gilson questions the logic of banning asbestos and asks whether a ban is the most effective and economical

means of reducing the number of cancer cases. On this point, he writes: "If the proposed ban on asbestos went into effect today, there would be no impact on the number of deaths caused by asbestos until the year 2000. And it is difficult to assess, for cancers occurring after the year 2000, what proportion can be linked to exposure prior to the ban."

He also believes that it is difficult to determine what proportion of cancers can be avoided in the workplace and environment by banning asbestos.

#### **Methodological Flaws**

In addition, the British researcher sees several methodological errors in the EPA's analysis. He notes first that the Agency makes no distinction between the various types of fibre, which runs counter to the most recent research on the harmful effects of asbestos.

Dr. Gilson also points out that trying to predict the number of possible cancers using the number of fibres inhaled per year as the sole criterion is a delicate matter. He points out that this would require combining several variables such as the dimensions of the fibres, their distribution in the air, their degree of aggregation, the type of fibres and maybe even the particular blend of different types of fibres.

Dr. Gilson concludes that the EPA has not assembled a convincing case for banning all forms of asbestos. The British physician rejects the EPA's thesis that recycling asbestos in urban areas would pose a significant threat to the public. He further says that most researchers share this point-of-view and have concluded that the environmental threats which asbestos poses are very slight -- in fact, negligible.



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUE

## DR. J.M.G. DAVIS DEPLORES THE EPA'S LACK OF SCIENTIFIC RIGOR.

Dr. Davis is head of the  
Pathology Department at the  
Institute of Occupational  
Medicine in Edinburgh,  
Scotland.

### Methods of Calculation Which Lack Scientific Rigor

Dr. Davis, head of the Pathology Department at the Institute of Occupational Medicine in Edinburgh, believes that the EPA's calculations are frequently based on studies which are not accurate enough to justify banning asbestos. He especially denounces the use which is made of data collected before 1960.

The Scottish physician explains that the techniques available at the time did not permit an accurate count of the number of airborne dust particles. At best, one could define three levels of exposure: high, medium and low. Dr. Davis believes that, given these conditions, one cannot determine the health risk, the way the EPA does, with very much precision.

The physician also notes that the linear non-threshold dose/response model which the EPA used is far from gaining the unanimous approval of the scientific community. The main problem, according to Dr. Davis, stems from the

lack of data on exposure to extremely low doses so that one must content oneself with extrapolations such as those which the EPA employs. Under these conditions, the Scottish researcher thinks that the model used may overestimate the risk of cancer from exposure to carcinogens.

#### **All Fibres Are Not Equally Harmful**

Dr. Davis is also very surprised that the EPA makes no distinction between chrysotile and other asbestos fibres. In his view, this attitude runs counter to several epidemiological studies which show that chrysotile is much safer than other types of fibre.

The Scottish physician is equally surprised that the American agency also draws no distinction between fibres of different dimensions. He points out that current studies indicate that long and thin fibres are much more carcinogenic than short and thick ones.

He sees this distinction as very important when it comes to assessing the quality of the air in buildings containing asbestos materials. Available studies indicate, he says, that in most cases the fibres suspended in the air are short ones. According to Dr. Davis, this discovery indicates the danger of extrapolating health risks on the basis of data drawn from exposure to long fibres.

#### **All Substitute Products Also Hazardous**

As for substitute products, Dr. Davis notes that any product containing fibres with the same dimensions as asbestos and the same durability in lung tissue are just as hazardous. Dr. Davis states the problem in these terms:

3.

"Does an industrial society need products made of fine and durable fibres? If so, then fibres with a high degree of durability in the environment and little durability in lung tissue would be the ideal material. In that case, it may prove difficult to find one better than chrysotile."



L'INSTITUT DE L'AMIANTE  
THE ASBESTOS INSTITUTE

# COMMUNIQUÉ

## DR. RAYMOND BÉGIN SAYS ASBESTOS IS NOT A MAJOR CAUSE OF CANCER.

Dr. Raymond Bégin is director  
of the Lung Clinic at the  
University of Sherbrooke  
Medical Centre.

### Cigarettes More Dangerous than Asbestos

Dr. Raymond Bégin severely criticizes the analytical methods used by the EPA and disagrees with the Agency's conclusions. The Director of the Lung Clinic at the University of Sherbrooke Medical Centre comments, in his text, on the relationship between the two types of lung cancer and asbestos.

In the case of pulmonary carcinoma, Dr. Bégin notes that cigarettes are by far the decisive factor and once this factor is eliminated, this type of cancer is rarely seen. He says that the number of lung cancers observed in non-smokers is very low compared to the number of cases which develop in smokers with no exposure to asbestos.

As for mesothelioma, Dr. Bégin points out that this disease is very rare and that half of all cases have no connection with asbestos. He further specifies that this pulmonary lesion occurs no more frequently in Eastern Townships mining towns than in large cities.

### **Brakes and Other Friction Products**

The University of Sherbrooke professor also disagrees with the EPA's conclusions on the risks related to brake maintenance and other asbestos-based friction products. He says that there is only one study on the subject and the data which it contains are unconvincing. He points out that the CSST (Commission de la Santé et de la Sécurité du Travail) has never paid benefits for alleged cases of exposure to asbestos even though 4,000 to 5,000 Quebeckers work in the industry.

### **A Questionable Theoretical Model**

Dr. Bégin also questions the theoretical model which the EPA used for its analyses. It strikes him as particularly inadmissible that this model has no threshold. The fact that many workers exposed to asbestos have never contracted illnesses related to exposure to asbestos dust seems to prove, he says, the existence of definite thresholds in the development of asbestosis.

He also challenges the linearity of the model used on the basis of recent studies which indicate that exposure to small doses of chrysolite results in no excessive incidence of lung disease. Dr. Bégin therefore thinks it unfair that a regulation aimed at banning asbestos should be based on that type of model.

### **Little-known Substitute Products**

The Sherbrooke physician also questions the substitute products which the EPA proposes. He says that the biological activity of these substitutes has not yet been sufficiently assessed and that some appear to be just as harmful as asbestos.

Dr. Bégin therefore recommends that all fibrous materials be subject to the same regulatory control as asbestos and that the labelling requirements for all fibrous materials be similar.