

NEWSLETTER

Newsletter from the Asbestos Institute

For safe and **responsible**
use of chrysotile

Number 4, April 2003

CSTEE Opinion on Chrysotile and Substitute Fibres: **Don't Confuse Us With Facts, Our Mind Is Made Up**

On December 17, 2002, the Scientific Committee on Toxicology, Ecotoxicity and Environment (CSTEE) of the European Union published an opinion on the "Risk to human health from chrysotile asbestos and organic substitutes". This opinion followed the obligation in the directive on asbestos adopted by the European Commission in 1999 whereas the Commission has to "ask the CSTEE to undertake a further review of any relevant new scientific data on the health risks of chrysotile asbestos and its substitutes before 1 January 2003; whereas this review will also consider other aspects of this directive, in particular the derogations, in the light of technical progress; whereas, if necessary, the Commission will propose appropriate changes to legislation".

In fact, the CSTEE had already produced, on two occasions, an "opinion" on the subject. The first one, dated February 9, 1998, led to an opinion on a study performed by ERM (Environmental Resources Management, Oxford) entitled "Recent Assessment of the Hazards and Risks Posed by Asbestos and Substitute Fibres World Wide". The second "opinion", dated September 15, 1998, also dealt with "Chrysotile asbestos and candidate substitutes". Of the options proposed by Directorate General III of the European Commission, the CSTEE chose, in the first instance, the following as the simplest for consideration:

"On the basis of the available data, do any of the following substitute fibres pose an equal or greater risk to human health than chrysotile asbestos?"

- Cellulose fibres
- PVA fibres
- P-aramid fibres

Particular consideration should be given to the relative risk to para-occupational workers and other users of the asbestos-containing products in comparison to non-asbestos products."

In February 1998, the CSTEE report mentioned that with regards to the ERM's conclusions on substitute fibres, the members of the CSTEE took issue with the ERM's contention that three fibrous materials (polyvinyl alcohol, cellulose and para-aramid fibres) are the main alternatives to chrysotile, without giving any valuable information on the technical performance of these materials. Furthermore, the CSTEE did not accept the conclusion reached by ERM to the effect that "...it would appear that these types of fibres are likely to pose less of a risk... than chrysotile", while at the same time recognizing that little research has been carried out on hazards and risks posed by candidate substitutes. The CSTEE noted that the ERM study offered no criteria for comparing hazards (i.e. the potential to cause harm) and risks (at the same level of technical performance) of chrysotile, MMMFs and other substitute fibres. More specifically, the CSTEE mentioned that: "the data presently available are by no means comprehensive and does not allow the assumption that a threshold level can be legitimately applied; hence, the conclusion that specific substitute materials pose a substantially lower risk to human health, particularly public health, than the current use of chrysotile is not well founded..."





Just a few months later (September 9, 1998), the CSTEE members, responding to the request from the Directorate General III of the European Commission ("On the basis of the available data, do any of the following substitute fibres pose an equal or greater risk to human health than chrysotile asbestos") and, after having stated in its first "Opinion" (February 9, 1998) that... "the conclusion that specific substitute materials pose a substantially lower risk to human health than the current use of chrysotile is not well founded..." went on to state that they are of the opinion that some specific substitutes pose a lesser risk to human health than chrysotile asbestos! This reversal of opinion poses the valid question of "what is the basis for this significant change of position in such a short time?"

It is disturbing to find that on the third occasion the CSTEE had to produce yet another "opinion" (December 17, 2002) notwithstanding. The members of the CSTEE did not really assess the most recent scientific on chrysotile asbestos. And, it is not because they did not have the opportunity to review and scientifically analyze such new evidence. On several occasions, especially during the months of October, November and December 2002, the members of the CSTEE were offered the opportunity to review the recent data from a full and detailed presentation by the principal investigator and coordinator of a chrysotile biopersistence study. Indeed, in the December 21-page report, only a very brief, three-line mention is made of the study: "The clearance half-time of Brazilian chrysotile in rats has been reported to be in the order of 10-15 days. Similar findings were observed in an ongoing study with Canadian chrysotile whose preliminary results were made available to the CSTEE (Bernstein, personal communication, 2002)". There were no other comments, and no attempt was made to assess this new set of data which would have helped put the risk of amphibole-free chrysotile in perspective with that of other fibrous materials proposed as substitutes, and to properly examine more recent evidence from experiments carried out in European laboratories, showing that the key parameter of biopersistence of the chrysotile variety of asbestos (as opposed to the other asbestos varieties, the so-called "amphiboles", which in the past were often included as "mixtures" of different asbestos types in asbestos-containing products) was no more, and possibly less biopersistent than some of the man-made replacement fibres proposed as alternatives, or "substitute" fibres.





"Substitutes": Are they really safer?

In addition to the absence of an adequate and scientific assessment and analysis of the results of the most recent chrysotile biopersistence studies, a very real concern is now brought to light by the fact that at least two of the three "substitute" fibres (PVA, P-aramid and cellulose fibres, which the CSTEE had identified as acceptable replacements in their September 15, 1998 "opinion") have shown considerably greater biopersistence than the chrysotile asbestos these man-made materials were meant to replace. In fact, chrysotile fibres were shown to clear from the lung about seven times faster than p-aramid fibres, and nearly two orders of magnitude faster than cellulose fibres.

One more point: Whereas 10 of the Directive 99/77/EC did call for the CSTEE to review... "the headline risk of chrysotile asbestos and its substitutes", not only of some three specific substitutes. Yet, in their December 2002 "opinion", the CSTEE limited its comments to the three substitutes just mentioned.

The December 17, 2002 report recognizes that "no formal epidemiological studies on the long-term effects of para-aramid have been reported". Regarding cellulose fibres, the report mentions one new study showing no trend for lung cancer related to duration of employment, but the levels of fibre dust were not indicated. How then can one make a comparative risk assessment? Furthermore, the report does indicate a 1998 study showing that cellulose and plastic fibres have been found in resected human lungs, in 83% of non-neoplastic lung specimens, and 97% in malignant lung specimens.

The above remarks clearly show that this last "opinion" is totally inadequate in providing support to the CSTEE's December 2002 position, which "reiterates its previous conclusion that the evidence for harmful potential is more extensive for chrysotile than for its organic substitutes".

More importantly and specifically, the December report did not specifically address the issue of the risk posed by the modern, present-day, chrysotile use in its current, high-density applications (i.e. embedded in a solid and safe matrix {cement}) such as chrysotile-cement products, for which we have been requesting derogations. And it now appears obvious that the CSTEE did not, and could not proceed to properly examine this relevant issue within the terms of reference of its mandate, because it had not received from the DG-Enterprise the mandate to address this specific issue.

However, even if they suppose that substitute fibres appears to the them to be less hazardous to human health than chrysotile, CSTEE strongly recommends expansion of research in the areas of toxicology and epidemiology of the substitute fibres as well as in the technology of development of new, thicker (less respirable) fibres.

Overall, this opinion clearly seems to be more political than scientific...





Alarm rising in Denmark over plastic piping

The Danske Kommuner (www.dk.kl.dk) reports that contamination of drinking water via plastic piping is more widespread than previously thought, and therefore increasingly recognised as a potentially serious problem in Denmark.

Analysis of data collected from 197 of Denmark's 271 local authorities by the environmental protection agency (EPA) disclosed 67 cases of pollution by a range of chemicals, including benzene, oil and solvents that had leached through the pipes. This number double of what was expected.

In 34 cases, the pipes had been laid at, or near inappropriate sites, such as petrol stations, in breach of regulations. In the other 33 instances, often involving private property, contamination was "unforeseen". Piping made of both soft plastics and harder types such as PVC was involved. The authorities also report on work carried out at the Technical University of Denmark (DTU) suggesting that "impurities" in the pipes themselves are an additional source of pollution. Recent detection of phenols attributed to plastic piping is "the tip of the iceberg", the magazine says. The DTU scientists reckon they have identified barely 10% of the compounds that are probably present.

Plastic piping delivers about half of Denmark's drinking water.

Denmark was among the first countries to ban the use of chrysotile-cement water pipes, and many NGOs and industries recommends PVC and plastic pipes as a safe alternative for chrysotile, even if vinyl chloride is a class 1 carcinogen and that the manufacture of PVC creates emissions of dioxins and furans, both considered to be harmful to the environment.

Asbestos litigation in the U.S.: the untold story

The asbestos issue in the U.S. is now more a legal issue than an occupational health problem. Some very large companies had to pay huge compensation for people who may have been exposed to asbestos, and litigation has forced 60 companies into bankruptcy since 2000. Currently there are some 600,000 asbestos-related lawsuits pending, and about 70,000 more cases are being filed every year. As a consequence, manufacturers started a massive switch-over to other fibres such as fibreglass and cellulose.

Anyone can conclude that asbestos could really be a major public health issue, like some alarmist statements would like us to believe. But a closer look at the reality reveals some curious aspects, not related to health. About 700 law firms are actively seeking clients for asbestos-related lawsuits, many using "mobile clinics" to "screen" otherwise-healthy people by scouring medical histories or even taking x-rays in the search for any evidence they may be a "victim". Ads are placed by lawyers looking to cash-in on the asbestos lawsuit craze by finding someone, anyone, who might have been exposed to asbestos so they can sue.





Insurance industry studies show that around 80 percent of the people suing have no symptoms or other signs of any disease caused by asbestos. Certainly many workers have terrible diseases after being exposed to asbestos. Some were likely even the victims of uncaring employers who didn't pay attention to the dangers, or didn't provide proper safety equipment. Those men and women are the true victims, the ones who should be asking for compensation. But with a quarter-million people -- the 80 percent having no symptoms of anything -- in line too, bankrupting their former employers with frivolous claims, what's the chance that the real victims will get their due?

Finally, on February 11, 2003, the American Bar Association endorsed a plan to cut asbestos claims by weeding out plaintiffs who aren't sick. The bar will now join other groups to lobby for legislation that would set medical criteria for asbestos plaintiffs to meet before they can file for non-malignant illness. According to many lawyers, this measure could bar 90% of the 600 000 pending cases.

Sources

- 1) www.StellaAwards.com, #20: February 12, 2003.
- 2) *Business Week*, February 24, 2003, page 46.

U.S. Environmental Protection Agency

To Review Asbestos Cancer Risk Assessment

The U.S. EPA recently announced a peer consultation workshop on a proposed asbestos cancer risk assessment methodology. The purpose of the workshop is to discuss the scientific merit of the proposed methodology developed for EPA by two scientists, Dr. Wayne Berman and Dr. Kenny Crump. The proposed methodology distinguishes carcinogenic potency by asbestos fibre size and asbestos fibre type and advocates use of a new exposure index to characterize carcinogenic risk. The workshop will be held on February 25-27, 2003. Copies of the proposed asbestos cancer risk assessment methodology can be obtained prior to the meeting from the EPA, OERR web page (www.epa.gov.superfund).

EPA's current assessment of asbestos toxicity is based primarily on an asbestos assessment completed in 1986, and EPA's assessment has not changed substantially since that time. The 1986 assessment considers all mineral forms of asbestos and all asbestos fibre sizes to be of equal carcinogenic potency. However, since 1986, there have been substantial improvements in asbestos measurement techniques and in the understanding of how asbestos exposure contributes to disease. To incorporate the knowledge gained over the last 17 years into the agency's toxicity assessment for asbestos, EPA oversaw the development of a revised methodology for conducting risk assessments of asbestos. The proposed risk assessment methodology distinguishes between fibre sizes and fibre types in estimating potential health risks related to asbestos exposure. Experts to be heard will include scientists with extensive expertise in relevant fields, such as biostatistics, fibre identification, inhalation toxicology, and carcinogenic mechanisms. Comments, conclusions, and recommendations on the proposed methodology will be published later this year.

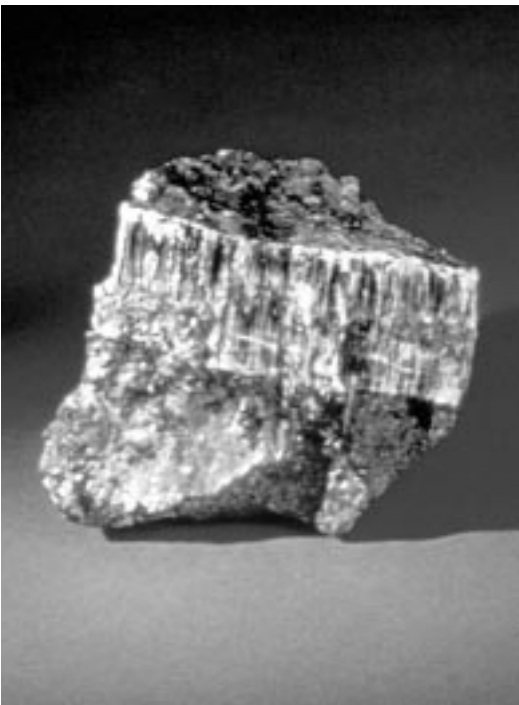




The exception does not make the rule

Many legislative authorities have motivated their decision to restrict the use chrysotile because there exists no proof that there is an exposure level below which chrysotile can be used safely. The European Commission and the French Ministry of Health, notably, recognize that amphibole free chrysotile does not generally pose a threat to health, but there exists a doubt, based on a study by Dement et al in 1983, and revised in 1994, on workers in a textile manufacturing plant in Charleston (South Carolina, USA). This study indicates that workers in the textile plant, reputed to having been exposed almost exclusively to chrysotile fibres, are showing 30 times more lung cancers than the general population.

The data of this study contradicts other studies on chrysotile, which demonstrates that at low levels of exposure (below 2 f/cc), no increased pulmonary diseases or cancer is observed. Thus, the Charleston study is a case apart, which many scientists have tried to explain utilising divers hypothesis. But, to date there did not exist a satisfying answer, which motivated legislators to opt for prudence, certainly excessive, and consider that in certain instances, chrysotile could have health effects similar to amphiboles exposure. This attitude was contrary to the conclusions of the majority of epidemiological studies - but who could oppose this interpretation to side with the precautionary principle, especially in the absence of a plausible scientific explanation?



At a meeting of experts convened by the EPA to discuss the new model of risk assessment (see article on this subject), the Charleston paradox, was of course discussed again, and finally light was brought to the surprising results obtained. More indepth pathological studies on the workers of this textile plant, the results of which have just been made public, demonstrate that the workers were undoubtedly exposed to amphibole fibres. Therefore, the excess of disease observed in the textile workers are entirely imputable to the inhalation of amosite fibres, used conjointly and over long periods of time, with chrysotile fibres in the textile manufacturing. Thus, the Dement study is in harmony with other studies realized on cohorts of workers exposed to amphiboles, or to mixtures of chrysotile and amphiboles, but cannot be used to evaluate the impact of exposure to chrysotile.



Asbestos conference in Russia

On June 3-7, 2002, an international conference entitled "Safety in the Production and Use of Asbestos and Other Fibrous Materials" was held in Ekaterinburg, Russia. Participants from Azerbaijan, the United Kingdom, Vietnam, Germany, Zimbabwe, India, Iran, Canada, China, Cuba, Romania, the USA, Thailand, Turkey, Uzbekistan, the Ukraine, Finland, Japan and Russia agreed that "issues regarding the safe use of all natural and artificial fibrous materials, their production and possible environmental impacts require additional experimental, clinical and epidemiological studies and further technical improvements". In other words, consumers of those products should assure a controlled environment and be responsible for their use.

The conference participants mandated the conference Organizing Committee to submit to the World Health Organization (WHO) and to the International Labour Organization (ILO) the following proposal:



- To create an international group of experts, who would report to the WHO and the ILO. This group of experts would hold special meetings, to analyse scientific data concerning the safe use of natural and artificial fibrous materials in different products and under various conditions in accordance with the requirements listed in the ILO Convention 162 "Safety in the use of Asbestos", and other corresponding international documents, before a final decision is adopted by the EU and;
- To develop an international research program from 2003-2007 in order to clarify questions for discussion in a framework of the above mentioned issue.





Chrysotile Symposium in Latin America

Producers and consumers of chrysotile met in Mexico, February 2-5, 2003. Approximately fifty people from some 10 countries attended this symposium.

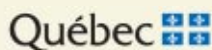
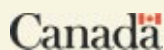
Country reports were tabled and an overview of the international situation was presented and discussed. In view of the pressure being applied by European enterprises in favour of banning chrysotile in Latin America, the difference between the needs of the European Union, where there is little or negative increase of chrysotile-use in most the E.U. countries, compared to Latin American countries where there is increase in the rate consumption, was emphasized.

At the moment, the European Union does not need large infrastructure projects to endow its population with drinking water, housing, etc., as was the case in WW2, when 22 million tonnes of asbestos was used to respond to the enormous needs of the population. The economic stakes are very apparent in this part of the globe where the need for infrastructures for housing and supply of potable water is immense. The pressure in favour of abandoning the use of chrysotile containing products originate from multinational consortiums which, for decades, inundated the market with chrysotile containing products and that now offer new asbestos-free technologies. Supposedly these alternative products are not a cause of concern health wise, but these allegations are not supported by medical and scientific studies, while costing more, being less durable and with lower performance.

It was unanimously endorsed that Latin American countries adopt a more proactive attitude, which would consist primarily of not wasting time responding to attacks, but first attempting to contact competent authorities and public opinion by providing factual information on chrysotile. Furthermore, it was agreed that industry should work in closer partnership with the Asbestos International Association (AIA).

This Newsletter is available in English, French and Spanish.

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