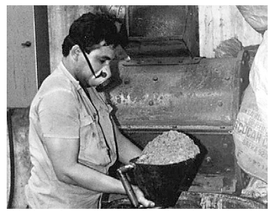
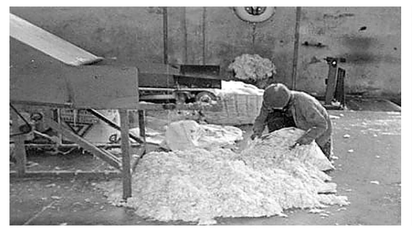
The Controversy about Chrysotile Asbestos in Canada

Bags of loose asbestos in Brazil – Courtesy CAW


Worker handling asbestos in a brake shoes plant- Courtesy CAW


Working with asbestos in Pakistan- Courtesy CAW


Worker handling chrysotile in Peru -Courtesy CAW


Construction site with crumbling chrysotile asbestos in Peru - Courtesy CAW

On May 23 & 24, 2006, an event is being held in Montreal called *The International Conference on Chrysotile: Chrysotile at a Turning Point, Results and Scientific Perspectives.*

We challenge the claims made by the conference organizers.

Their assertion that "chrysotile asbestos is safe" is not scientifically substantiated. At the very least, the Institute's claims are a deliberate misinterpretation of study results.

The undersigned have purchased this advertising to help the public understand the other side of the controversy. We have structured the information below to answer the claims that are being made by industry apologists at the conference.

The advertising for the industry-organized Chrysotile Conference claims:

" Scientifically, everything has changed for chrysotile."The last few years have brought major scientific advances. Regarding biopersistence of fibres, new data (2003) have confirmed identifiable epidemiological differences between chrysotile and amphiboles. Studies published on American, Brazilian and Canadian chrysotile have strengthened and confirmed the results by McDonald and McDonald (1997 study) asserting that amphiboles remain in the lungs while chrysotile is quickly eliminated. Additionally, a complete case review on the subject of asbestos presence in the brakes and friction materials industry (2004) reveals that it is workers exposed to amphiboles who have developed asbestos-related diseases - and not workers exposed to pure chrysotile."

"With today's industrial techniques and work practices, the use of chrysotile in high density products does not represent any significant risk to human health. This fibre provides significant societal benefits to emerging countries, particularly as to sanitary infrastructure construction and housing."

The conference is organized by the Chrysotile Institute and the International Chrysotile Association, formerly the Asbestos Institute and the International Asbestos Association, heavily subsidized by asbestos companies and the Canadian and Quebec governments.

A similar conference with most of the same organizers was recently held in Indonesia. There the asbestos industry scientists, argued that "chrysotile" is safe for use in Indonesia. This exercise was sanctioned by the Canadian Government. Canada provided its logo, embassy, and a colourful program announcement, issued under the auspices of the Canadian Embassy, as well as a networking cocktail party.

> "Our factory is so safe that our workers don't need to wear masks", but workers' hair is often white with asbestos.

Canada and other chrysotile producing countries are increasingly isolated in their claims that chrysotile is safe to use and to mine.

Throughout the world, there is a growing consensus that exposure to all types of asbestos –including chrysotile - can kill. This understanding is shared by the International Labor Organization, the World Health Organization's International Agency for Research on Cancer, the International Programme on Chemical Safety, the European Union, the Collegium Ramazzini, the International Social Security Association, the World Trade Organization, the International Commission on Occupational Health, the International Federation of Building and Woodworkers, the International Metalworkers' Federation and the Governments of: Argentina, Australia, Austria, Belgium, Chile, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Gabon, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Italy, Japan, Kuwait, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Saudi Arabia, Seychelles, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom and Uruguay, and scores of independent scientists.

Two recent peer-reviewed articles that confirm the dangers of chrysotile include:

Lemen, Richard A. Chrysotile Asbestos as a Cause of Mesothelioma. International Journal of Occupational and Environmental Health, Vol.10/No 2, Apr/Jun 2004 (includes an extensive bibliography)

Yano, Eiji, Wang, Zhi-Ming and others. Cancer Mortality among Workers Exposed to Amphibole-Free Chrysotile Asbestos. American Journal of Epidemiology, Vol 154, No 6,: 154-8, 2001.

What is the truth about the assertions made by the asbestos industry at the conference?

Can we believe the studies that argue that 1) chrysotile fibres have a shorter life in the lungs (reduced biopersistence) than amphibole or tremolite asbestos, and 2) that this proves that chrysotile is not dangerous to human health?

Asbestos, including chrysotile, is an Annex 1 toxin under the Canadian Environmental Protection Act.

Dr. David Egilman from Brown University says that the biopersistence argument does not hold water. He says: "These studies look at lung biopersistence. The so-called 'clearance' of chrysotile fibres from the lungs is an irrelevance as most of the fibers are not expelled from the body but are broken down into thinner fibers which do not disappear but are just too small to be seen. Some of these fibers migrate to the pleura where they accumulate and can cause cancer."

Dr. Barry Castleman, an independent expert on asbestos and a member of the Collegium Ramazzini, says that the issue of biopersistence "is a red herring. Many chemicals don't last long in the body, but along the way they cause cancer."

Dr. Morris Greenberg, a retired UK Factory Inspector, adds "The speed with which mineral fibres produce their effects in vitro, literally within minutes, makes me question the relevance of biopersistence. In other words, the damage done by the inhaled fibres can take place in a relatively short period of time and thus the clearance or dissolution of the fibres does not affect their carcinogenic potential…"According to Dr. Egilman: "Studies have shown that chrysotile is biopersistent at the cancer sites and that the cancer-causing process begins within hours or days of exposure. The fact that the research by Bernstein et al. avoids testing at the sites where asbestos-related cancer occurs is an intentional sleight-of-hand designed to produce the result wanted by their industry paymasters which is a clean bill of health for chrysotile."

The bulk of the research leading to the biopersistence argument has been carried out by Dr David Bernstein, a long-time consultant to the Canadian asbestos industry. The paper published by Bernstein in 2003: The Biopersistence of Canadian Chrysotile Asbestos was commissioned by and paid for with $1 million supplied by the Asbestos Institute, now renamed the Chrysotile Institute, which speaks for the Canadian asbestos industry.[1]

The latest report issued by the United Nations Environment Programme (March 9, 2006) throws doubt on the relevance of the biopersistence argument stating that:

"There is general consensus amongst the scientific community that all types of asbestos fibres are carcinogenic and can cause asbestosis, lung cancer and Mesothelioma when inhaled…

"Chrysotile is classified as a known human carcinogen…

"Furthermore it is still uncertain as to how long a fibre needs to remain in the lung in order to induce preneoplastic effects…

"Overall, the available toxicological data provide clear evidence that chrysotile fibres can cause a fibrogenic and carcinogenic hazard to humans even though the mechanisms by which chrysotile and other fibres cause fibrogenic and carcinogenic effects are not completely understood."[2]

Is the use of Chrystotile asbestos safe when it is in "non-friable" form?

A directive from the Canadian government encouraging the use of asbestos in federal public buildings argues that asbestos is safe if it is in "non-friable form" such as asbestos cement. However the asbestos still has to be mined, milled, transported and manufactured. Heaps of asbestos-laden tailings continue to contaminate communities that have mined asbestos in Quebec, and areas around Timmins, in the Yukon and northern B.C.

Canadian asbestos is exported in bags of loose material. The conditions under which "non-friable asbestos" is produced may well be unsafe, as these are countries with serious problems of regulation and enforcement. Even if it can be made into asbestos cement without incident, the sheets and pipes will deteriorate over time, or be re-used by citizens who are not aware of the dangers.

Can we protect importing countries like India, Thailand and Indonesia from the risks of asbestos?

Canada is a major exporter of chrysotile asbestos. In 2002, it exported 235,138 tonnes of crude and milled asbestos worth $140,201,000. At the same time, it exported some $16 million worth of asbestos cement and $87 million worth of brake linings and pads. Most of the milled asbestos (in bags) went to India, Mexico, the UAE, Thailand, Indonesia, Japan, South Korea and Algeria. The crude and manufactured asbestos went to the United States.

In India, Thailand and Indonesia, asbestos is used to make houses and huts where it crumbles and falls into the places where people live; doors and windows are cut by family members. Workers in Brazil and Peru, often handle the milled fibres without safety equipment.

> Studies have shown that chrysotile is biopersistent at the cancer sites and that the cancer-causing process begins within hours or days of exposure.

Tushar Kant Joshi, director of the Centre of Occupational and Environmental Health in New Delhi, has been persecuted in India for arguing for a ban on asbestos. He says there is no health and safety supervision in the construction industry or at the docks. "The Central Pollution Control board under the Union Ministry of environment and forests monitored eight major asbestos products manufacturing operations in India. Six of them were not complying with the emission standards, and for the remaining two, compliance or non compliance status could not be ascertained. In most cases, there were no monitoring platforms; bag houses and stacks were not properly maintained, and operations were intermittent."

In Gujarat, India, the manager of an asbestos factory says, "Our factory is so safe that our workers don't need to wear masks", but workers' hair is often white with asbestos.

In Peru in 2000, medical examinations of 197 asbestos and former asbestos workers found that 60% of them had asbestosis; the health of another 39% was cause for concern.

In the United States, where conditions are better, brake workers are seriously concerned about the rising rates of asbestos disease in backyard and professional mechanics working on older model cars. Thousands of personal injury claims have been brought by mechanics poisoned by working on replacement brakes containing asbestos. Canada has been an active participant in a lobby to suppress information about asbestos in brakes distributed by the EPA.

Even in Canada, there are problems with regulating asbestos use. In 1999, the Quebec Workers Compensation Board inspected 300 Quebec construction sites and found 118 violations of asbestos regulations.

What are the effects of mining asbestos on workers and communities in Quebec?

There are fewer than 800 jobs directly related to the mining of chrysotile in all of Canada. These jobs are in the historic Thetford Mines region of Quebec.

On July 19, 2004, a report entitled The Epidemiology of Asbestos-Related Diseases in Quebec[3] appeared on the website of the National Institute of Public Health in Quebec. The seventy-three page document explodes the asbestos industry's assertions that Canadian chrysotile is safe; there were 832 cases of pleural mesothelioma in Québec between 1982-1996:

"In comparison to the international community, the situation among Quebec men is only surpassed in several counties in the United Kingdom, several states in Australia and several regions in the Netherlands. Incidence rates of mesothelioma of the pleura rose significantly between 1982 and 1996 in Quebec's male population with a 5% average annual rate of increase…"

> The incidence of mesothelioma in Quebec is greater than that observed in the rest of Canada, and in Sweden, Norway, Israel, and several East European countries…

The authors note that:

"The incidence of mesothelioma in Quebec is greater than that observed in the rest of Canada, and in Sweden, Norway, Israel, and several East European countries…Quebec men and women also show significantly higher rates of mesothelioma of the pleura than men and women in the rest of Canada and in several other countries."

Significant numbers of individuals suffering from lung cancer and asbestosis were also identified, the vast majority of whose illnesses remained unacknowledged as occupationally-related and therefore uncompensated by the Workers' Compensation Board: "cases of occupational origin may be far underestimated." The effect of environmental asbestos exposure was also considered:

"The study of women diagnosed with mesothelioma in the town of Thetford Mines showed an increased risk of this cancer with an increase in their occupational and domestic exposure. It also suggested a possible impact from environmental exposures to asbestos."

Conclusion

Canadians should be ashamed of the duplicitous role our government is playing in promoting an industry that spreads death and destruction all over the globe. It was the Canadian Government that initiated a legal action at the World Trade Organization against the French national ban on asbestos. It was Canadian officials who orchestrated the blocking of a United Nations proposal to impose minimal safeguards on the global trade in chrysotile in 2003 and 2004. Our country is increasingly being seen as a pariah nation by the growing number of people who know the real truth about asbestos – it is a killer fibre which has no place in 21st century trade and commerce.

It should be banned at home and it should be banned globally.

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1-Kelso P. Canadian public health study reports chrysotile asbestos fibers are unsafe. Vol. 1, issue 9. Mealey's International Asbestos Liability Report 7 (2003). 2-United Nations Environment Programme. Rotterdam Convention on the Prior Informed Consent Procedure for Certain hazardous Chemicals and Pesticides in International Trade. Inclusion of the chemical chrysotile asbestos in Annex III of the Rotterdam Convention. 9 March 2006. UNEP/FAO/RC/COP.3/11. 3-This document is the English translation of a report first published in French which appeared on this website <http://www.inspq.qc.ca/publication> on November 14, 2003.