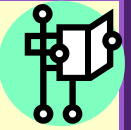




Summer 2009

# CANADIAN COUNCIL OF OCCUPATIONAL HYGIENE NEWSLETTER (CCOH)



## CCOH 2009 Executive

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## Editor's Message

Ah, finally we have some warm weather, it took a long time to come to Alberta but today at least, it's here. We have a rather lengthy newsletter this time for you. First we start with a couple of responses to the Canadian chrysotile asbestos issue which was recently explored by CBC ([CBC.ca](http://CBC.ca) | [The National](http://The National) | [Archive](http://Archive) | [Health/Education](http://Health/Education) | [Canada's Ugly Secret](http://Canada's Ugly Secret)). I do hope we have a bit of a rally for the cause from our hygiene community - if there was ever a time to use our profession to speak out against a practice the time is now.

It looks like the fall will be a busy time for conferences, see page 3 for dates and locations. I wasn't able to make the AIHCE conference this year in Toronto so I found Lorraine's account of events interesting on page 5. I heard the attendance numbers were down but that the people who did go had a good time and managed to learn a little along the way.

Finally, our congratulations go out to Mr. Luc Hamelin who was unanimously elected to the International Occupational Hygiene Associations (IOHA) 2010 -2011 President position. Mr. Hamelin is the first Canadian to be elected to this position since the creation of IOHA in 1987. The News Release on the last page provides an overview of Mr. Hamelin's past accomplishments and of the IOHA objectives. Mr. Hamelin's appointment presents an excellent opportunity to do good things on the international front.

Enjoy your summer, stay healthy and safe! ☺

Michelle

## Unethical Canadian Asbestos Peddlers

Michelle Kutz, B.G.S., CIH



Canada is one of the world's leading exporters of chrysotile asbestos but has little use for it on native soil.

Most of us are aware of the desolation in the lives of the people who live in the Third World. We have all seen the shanty towns that house the poor worldwide on the news. Our family once had the opportunity to visit our foster child at his home in El Salvador. The family of four lived in a small building constructed of corrugated sheets that I thought was tin. I now realize that the house was probably constructed of sheets of asbestos-containing transite board likely imported from Canada. In fact, El Salvador is one of many developing countries that imports and uses Canadian asbestos, and is also unknowingly lax in regulating hazardous asbestos exposures to workers, the public and consumers.

Canada is one of the world's leading exporters of chrysotile asbestos but has little use for it on native soil. Kathleen Ruff, in her document [Exporting Harm How Canada Markets Asbestos to the Developing World](#) sites numerous accounts of journalists observing people working with asbestos. One description tells how workers using no dust suppression controls and wearing no personal protection, pour asbestos from unlabelled bags into a machine before the fibres are mixed with cement. This task alone would contribute to a high asbestos fibre level in the workplace air but too often these bags split and the workers sweep up the spilled asbestos adding to an already hazardous situation. Unknowingly, these dust covered workers return home, bringing this deadly asbestos contamination to their families at the end of each day. Ruff writes "Most of the workers are impoverished day-workers who have not been informed of the dangers, and who have no say over working conditions. Few, if any of them, have any chance of having their illnesses diagnosed as occupational in origin, much less win compensation by industry for themselves or their families".

It would seem our federal government views risk communication in the Third World as bad for business. For example, when the Thai and South Korean

governments started labeling their bags of asbestos with a skull and crossbones their attempts were quickly squashed by the Canadian government. Apparently hazardous warning labels in the developing world are viewed as "excessive" by our government who swiftly pressured both governments to abandon the labeling. Our government's persuasive tactics were successful and both countries discarded their labeling effort. Thailand's use of Canadian asbestos now ranks amongst the highest in the world. However much to the dismay of Canadian asbestos exporters, South Korea isn't so easily swayed; they acknowledged the growing epidemic of asbestos disease and banned the use of asbestos in 2008.

Canada has also been instrumental in shutting down efforts to communicate the hazards of asbestos to the importers of our asbestos products in other ways. We have used numerous trade threats and persistently refused to allow chrysotile asbestos to be listed as a hazardous substance by the Rotterdam Convention.

There is no disputing the long-term health effects of asbestos. Historically chrysotile asbestos accounted for 95% of the asbestos used commercially in products and consequently was what workers were routinely exposed to. In the past, it was recognized that the shape of the chrysotile fibre made it ideal for weaving into cloth. However the toxic effects of this "miracle" fibre observed throughout history have proven that exposure to chrysotile asbestos is harmful to our health.

In 1929, the British government funded a study by Merewether and Price, which found a high incidence of asbestosis in workers at British asbestos textile plants. The hazards of asbestos exposure was again documented in the Dreesen's 1938 study, which evaluated South Carolina asbestos textile mills. In the 1960s and 1970s, several large American epidemiologic studies clearly established the association between high asbestos exposures and the later development of asbestosis, lung cancer, and mesothelioma.



## Unethical Canadian Asbestos Peddlers (Cont'd)

Why is it that we won't admit to the people of the Third World that asbestos is a dangerous fibre but have stringent regulations in Canada when it comes to asbestos in the workplace? In Canada there is no quibbling over whether it is chrysotile or actinolite; in Canada our Hazardous Products Act applies to all forms of asbestos! Why did Health Canada in 1989 declare: "the health hazards associated with inhalation of asbestos in the occupational environment have long been recognized and include asbestosis, bronchial carcinoma, malignant mesothelioma of the pleura and peritoneum and possibly cancers of the gastrointestinal tract and larynx" but in 2009 fail to readily release the findings of a study to the Canadian public on the dangers of chrysotile asbestos?

As Canadian occupational hygienists we have no doubt asbestos-related diseases are caused by all types of asbestos fibres that are inhaled and settle in the alveoli of the lungs. As Canadian occupational hygienists we have an obligation to workers everywhere to lobby our federal government to get out of the asbestos business. As a Canadian, I am ashamed of our asbestos exporting practice and the fact that we are responsible for asbestos-related diseases in developing countries.

### References:

Kazan-Allen Laurie, *Canadian Asbestos: The Naked Truth*, November 2007.

Merewether ERA, Price CW: Report on Effects of Asbestos Dust on the Lungs and Dust Suppression in the Asbestos Industry. London, His Majesty's Stationery Office, 1934.

Dreessen's Public Health Bulletin 241: A Study of Asbestosis in the Asbestos Textile Industry. Washington, DC, U.S. Government Printing Office, 1938.

Greenberg MI, Hamilton RJ, Phillips SD, McCluskey GJ, *Occupational, Industrial, and Environmental Toxicology*, 2<sup>nd</sup> Edition, Mosby Inc. Philadelphia, Pennsylvania, 2003.

1989 Health Canada technical document related to the quality of drinking water in Canada

### LETTER CAMPAIGN TO PRIME MINISTER

Please send a letter to our PM protesting Canada's export of asbestos to the Third World. A form letter can be printed from CCOH website.

## UPCOMING CONFERENCES

**September 13 – 15**

### **BC Municipal Occupational Health & Safety Conference**

Whistler, British Columbia, Canada

E-mail : [registration@pacificsafetycenter.com](mailto:registration@pacificsafetycenter.com)

Web : <http://www.municipalsafety.bc.ca>

**September 14 – 17**

### **Association of Canadian Ergonomists 40th Annual Conference - Ergonomics – Think it. Live it**

Quebec, Canada

E-mail : [info@ace-ergocanada.ca](mailto:info@ace-ergocanada.ca)

Web : <http://www.ace-ergocanada.ca>

**September 15 – October 15**

### **Fifth International Cyperspace Conference on Ergonomics (CybErg'08) Local Knowledge, Global Applications - Online**

E-mail : [secretariat@cyberg2008.org](mailto:secretariat@cyberg2008.org)

Web : <http://www.cyberg2008.org>

**October 3 -6**

### **PCIH Best Practices. Best Performance. Best Standards**

Vancouver, BC

Conference Information:

<http://www.aiha.org/pcih09/default.htm>

**October 7 - 8**

### **2009 Northwest Occupational Health Conference**

Vancouver, BC

Conference Information: <http://www.pnsaiha.org>

**October 26 - 29**

### **8th Annual Alberta Health & Safety Conference and Trade Fair**

Calgary, Alberta

Conference information: <http://www.hsconference.com/CONFERENCE-Intro.html>

**October 27 - 28**

### **Occupational Hygiene Association of Ontario (OHAO) Professional Development Courses & Fall Symposium**

Information: <http://www.ohao.org>

## Chrysotile Asbestos Consensus Statement and Summary Published by Health Canada – At Last

Lorraine Shaw, B.Sc., CIH, ROH



Health Canada's  
Chrysotile  
Asbestos  
Consensus  
Statement and  
Summary  
available at:

<http://canadianlabour.ca/en/chrysotile-asbestos-consensus-statement-and-summary>



In November 2007, Health Canada assembled an expert panel to see what degree of consensus exists on the risks from exposure to chrysotile asbestos. The panel was chaired by Trevor Ogden, Aerosol Physicist and Editor in Chief of the *Annals of Occupational Hygiene*. The report was completed in March 2008, but curiously, not published until April 9, 2009, most likely due to the politics involved in the Canadian chrysotile industry. It is available on the Canadian Labour Congress website: <http://canadianlabour.ca/en/chrysotile-asbestos-consensus-statement-and-summary> (Accessed July 4, 2009).

The report can also be requested from Health Canada by contacting [panel@hc-sc.gc.ca](mailto:panel@hc-sc.gc.ca)

More interesting than the report itself is the mystery surrounding the delay in its publication. This is discussed in an article in the May 2009, *Canadian Medical Association Journal*, where Trevor Ogden, the Chair of the panel expressed surprise at the delay in the release of the report: "Many people who read the reports will wonder what all the fuss is about," Ogden, editor-in-chief of the *Annals of Occupational Hygiene*, says in an email to *CMAJ*. "If they had been put on the Health Canada website a year ago they would have attracted little interest. This is a classic example of a document gaining disproportionate status by being kept secret." Health Canada, however, claims the delay was necessary. In an email to *CMAJ*, Health Canada Media Relations Officer Christelle Legault says, "Health Canada took the time necessary to carefully review the findings of the report, and to consult other federal and provincial partners."

I found the report disappointing for several reasons:

It does not present any new scientific analysis, but focuses on discussions of two meta-analyses of asbestos exposure studies: One by Hodgson and Darnton

(2000) and one by Berman and Crump, (2003, revised 2008). The panel of six experts released a consensus statement, but two of the members of the panel also attached reservations. Since the panel included members of have expressed opposing views on the subject in the past, this is not surprising.

### Report Findings:

I urge readers to access the report and read it for themselves, but present a summary of the report findings:

Table 1, taken from the report, compares Hodgson and Darnton's and Berman and Crump's meta-analyses of epidemiological studies of chrysotile asbestos exposure for which exposure-response relationships could be estimated.

**Table 1  
Risk Estimates for Chrysotile as  
Given by Hodgson and Darnton and  
Berman and Crump**

Cumulative Exposure (occupational exposure pattern: 8 hr/day, 240 days/yr)	Lung Cancer Deaths per 100,000 exposed	Mesothelioma Deaths per 100,000 exposed
0.01 f/ml.yr	B&C: 0.028 0.083 0.21 H&D: Possibly 0 Very probably <1 Possibly 1	B&C: 0 0.01 0.082 H&D: Probably <1 Highest arguable 1
0.1 f/ml.yr	B&C: 0.28 0.83 2.1 H&D: Possibly 0 Probably <1 "Cautious estimate 3"	B&C: 0 0.1 0.82 H&D: Probably <1 Highest arguable 4
1 f/ml.yr	B&C: 2.8 8.3 21 H&D: Possibly 0 2 30	B&C: 0 1 8.2 H&D: 1 5 20
10 f/ml.yr	B&C: 28 83 210 H&D: (no figure given) 50 300	B&C: 0 10 82 H&D: 6 20 60

## Chrysotile Asbestos Consensus Statement and Summary Published by Health Canada – At Last (cont'd)



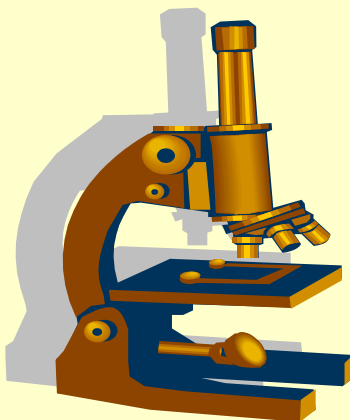
The two meta-analyses were analysed in different ways, with different assumptions made, therefore the estimates are not equivalent. The differences in the studies were:

1. H&D did not differentiate “pure”chrysotile exposure to chrysotile exposures where tremolite asbestos was present as a contaminant. Therefore the risk assigned to chrysotile exposure may include a contribution from tremolite. B&C used available information (often incomplete) to try to remove the contribution of tremolite asbestos.
2. H&D derived an average exposure and an average disease risk for each cohort and used the results from different cohorts to estimate overall dose-effect relationships. This meant that they were able to include studies for which there was only one average exposure given. B&C estimated the exposure-risk relationship within subcohorts in each study, which allowed for adjustment for different background lung cancer rates in the cohorts.
3. B&C assumed linear relationships between disease and exposure, even though they observed some non-linearity for both lung cancer and mesothelioma, but they assumed the risk depended on the cube of the time since first exposure for mesothelioma. H&D estimated the best-fitting, non-linear relationships. The difference between the two models is most evident at low exposures, where there is little epidemiological data and risks are low.
4. B&C pooled pleural and peritoneal mesotheliomas, while H&D differentiated between the two types.
5. The Charlston cohort was included in B&C’s estimates, but excluded from the H&D study. They stated the Charleston estimates separately as “exceptional” (unexplainably high), but possible.

The results of the two meta-analyses are broadly similar, even though the methodology used for the analyses were different. Table 1 shows that the studies agree in risk estimates within an order of magnitude.

### References:

1. Health Canada (2009) Chrysotile Asbestos Consensus Statement and Summary, Chrysotile Asbestos Expert Panel, Montreal, Quebec, November 13 – 14, 2007.
2. Ogden T. (2009) Canadian Chrysotile Report Released – At Last. *Ann Occup Hyg*; 53:307-309.
3. Collier, R. (2009) Asbestos Panel Chair Mystified by Secrecy Surrounding Report. *CMAJ* 180(11):1100.



# AIHCE 2009

Lorraine Shaw, B.Sc., CIH, ROH



It is a source of pride to all Canadian Industrial Hygienists that two of the most prestigious Industrial Hygiene Conferences, the American Industrial Hygiene Conference and Exposition (AIHCE) and the Professional Conference in Industrial Hygiene (PCIH) are being held in Canada in 2009.

AIHCE took place May 30 – June 4<sup>th</sup> at the Metro Toronto Convention Center.

The conference started off on Friday with a Certified Safety Professional exam preparation workshop, followed by two days of professional development courses. I took an informative course on surface sampling for dusts.

On Monday, the opening ceremonies included XXX and a thought provoking keynote address on “Challenges, Progress, Innovation: Predicting the Future by Creating It” by Peter H. Diamandis, Chairman and CEO of the X PRIZE Foundation. This talk was followed by the opening of the Exposition. The conference featured many outstanding sessions and roundtables on Canadian occupational health and safety issues. These included:

**CR 304** Adapting to Climate Change – Use of WBGT as a Community Heat Metric in Canada

**RT 211** The Future of the Profession of Occupational Hygiene in Canada

**RT 225** Current Issues in Confined Space Work in Canada – Thinking Outside the Box

**CR 319** Differences between US and Canadian Approaches to Environmental Regulation: What Industrial Hygienists Should Know

**RT 245** Occupational Health and Safety and Construction worker Education in Ontario

**RT 250** Building Bridges: Lessons from Native American/Aboriginal Occupational Health Issues

**RT 255** Safe at Work Ontario

**RT 261** Globally Harmonized System (GHS) – Implementation and Impact on Workplaces in Canada

The AIHA Meritous Achievement Award was presented to Gyan S. Rajhans, who worked for the Ontario Ministry of Labour from 1968 until his retirement in 2000 and now works as a consultant. Gyan's numerous contributions to the industrial hygiene field include: 1997, Chair of the ACGIH. 1987, Co-chair of AIHCE in Montreal, and 1999, Co-chair of AIHCE in Toronto.

Gyan has been a member of the ACGIH Industrial Ventilation committee since 1974 and now serves as its Chair. He is the author of four reference books and has co-authored 68 scientific and technical papers. The 30 Anniversary of the University of Toronto Industrial Hygiene Master's Program dinner took place on Sunday, May 31<sup>st</sup>. The dinner was attended by over 300 alumni of the course. Dr. Jim Purdham, recently retired professor in the program, was honoured at the dinner.

The Occupational Hygiene Association of Ontario and the American Industrial Hygiene Association signed a Memorandum of Agreement, giving mutual recognition to the two organizations at the International Reception on Monday evening.

For me, the highlight of the conference was the Canadian Reception, organized by Al Johnson and hosted by AMEC, 3M, WESA, The Pinchin Group, T.Harris Environmental, TransCanada Pipeline, REA, the Government of Ontario, the Occupational Hygiene Association of Ontario and the Canadian Council of Occupational Hygiene. This event, held in the ballroom of the historic Royal York Hotel, was the place to meet Canadian Industrial Hygienists. Not only did this reception have the best food of the all of the receptions at AIHCE, it was a great opportunity to meet friends and colleagues from across Canada.

In line with the theme of opening ceremonies speaker's (Peter H. Diamandis) talk which encouraged competition to drive innovation, AIHA added a session format entitled “Breakthrough Thinking Challenges”. There were two facilitated breakout style sessions: 1. Creating a regulatory environment in the US which will improve worker health and safety and 2. Increasing the impact of Occupational hygiene in on a global scale. Expert panels selected winning teams from each session and eventually AIHA selected a final winner from topic No. 2. Jason Hoffman will represent the winning team (Jeanne Fallon-carnie from GE energy, John Mulhousen from 3M Corporate Health and Safety, Rob Ferrie from NIOH and Jason Hoffman from Arcelormittal Dofasco) and present their social marketing strategy to the AIHA Strategic planning meeting in October.

## NEWS RELEASE

### CANADIAN PRESIDENT AT THE INTERNATIONAL OCCUPATIONAL HYGIENE ASSOCIATION (IOHA)

Toronto, Ontario, Canada, May 31, 2009. – At the Annual General Meeting of the International Occupational Hygiene Association ([IOHA](#)) held in Toronto on May 31, 2009 during the American Industrial Hygiene Conference and Exposition, country members have unanimously elected Mr. Luc Hamelin as President-Elect for 2009-2010. In practice, Luc will officially become IOHA President in 2010-2011. It is the first time since the creation of the association in Montreal in 1987 that a Canadian is appointed at the head of this international organization.



Photographed in Toronto, from left to right, the newly elected Officers on the Board of Directors (2009-2010) for the International Occupational Hygiene Association (IOHA) : Mr. Hugh L. Dalrymple, Secretary-Treasurer (United Kingdom), Mr. Luc Hamelin, President-Elect (Canada), Dr. Danilo Cottica, President (Italy) and Mr. Tom G. Grumbles, Past President (United States of America).

Luc also serves as Director-Quebec on the Canadian Registration Board of Occupational Hygienists ([CRBOH](#)). Between 2005 and 2007, he has accepted two mandates as CRBOH President. He has graduated in management (*UQAM'90*) and holds a Master of Science Applied (*McGill'91*) and a Master of Environment (*Sherbrooke'02*). He has worked for over 20 years in different positions as Professional or Manager in various business segments, such as manufacturing and the public sector. He is Assistant-Director, Prevention & Safety Department at the *Université du Québec à Montréal* ([UQAM](#)).

In 2007, Canada has become the first country within the Francophonie ([OIF](#)) to officially receive the IOHA recognition for its occupational hygiene accreditation process. Canada has joined Australia, Great Britain, Italy, the Netherlands, South Africa and the United States of America among the countries whose accreditation process is also recognized.

IOHA has been created to promote and develop occupational hygiene worldwide through member organizations and to improve and maintain safe work environments for all. IOHA organizes scientific conferences, publishes periodic newsletters, updates a Web site, encourages and supports networking and opportunities to develop occupational hygiene in various regions. In short, IOHA has a goal to improve the occupational hygiene practice and take into account academic, legislative and cultural conditions of each country.