Government of Canada Multi-Stakeholder Workshop on Regulations Respecting Formaldehyde Emissions from Composite Wood Products September 6, 2017 Ottawa, Ontario
Report by Sheila Cole for the CNHHE

The objective of this workshop was to inform stakeholders about the Government of Canada's initiative to develop regulations to reduce emissions of Formaldehyde from composite wood products and to solicit feedback to guide the regulatory approach.

Formaldehyde is a colorless gas commonly found in the indoor air of homes. It is a component of resins used as adhesives/binders in composite wood products, and testing has revealed that it is emitted from 91% of composite wood products. Exposure to formaldehyde can have significant health effects both immediately and over time. In the short term, it causes irritation of the eyes, nose and throat. It can cause one to develop asthma, can be an incitant causing asthmatic attacks in those who already have the disease, and can worsen the severity of already existing asthma. Health Canada (HC) reported that long-term exposures cause many health problems related to both heart and lung functioning and is an underlying cause of some cancers, particularly those of the nasal passageways.

I pointed out that Environmental Health Specialists cite exposure to formaldehyde as a significant contributing factor in the development of Multiple Chemical Sensitivities (MCS) and other immune-suppressive disorders. One such specialist from Nova Scotia, Dr. Gerald Ross noted in presentations at Dalhousie University during the late 1990's that while he practiced at the Environmental Health Centre in Dallas, Texas, many individuals who were diagnosed with MCS at the Clinic had recently moved into a new home or office or a newly renovated space where composite wood products and other building materials are known to off gass at high levels. Reducing the exposure of Canadians to formaldehyde should produce measurable positive health outcomes involving a range of diseases. This would in turn reduce medical costs across a broad spectrum of cardio pulmonary and systemic disorders.

Further, I raised the issue that care must be taken to ensure that concerns over socioeconomic impacts will not be to the disadvantage of low income individuals who live in affordable housing. There is always the danger that inferior building materials containing higher levels of formaldehyde could be used to increase affordability.

The intention of the new regulation is to reduce formaldehyde in composite wood products, and to facilitate early alignment with the regulatory approach in the USA. More than half of attendees at the meeting were industry representatives.

Given that many of these products are used in household construction and renovations, HC noted that 8% of Canadian homes that were tested had household average concentrations that exceeded the Department's long-term exposure limit which is 40 ppb. Emissions are worse in the summertime, driven by heat and humidity conditions. Limiting formaldehyde emissions from composite wood products will help prevent high exposures in Canadian homes and thus reduce the risk of adverse health effects.

Canadians are also exposed to formaldehyde occupationally. Carex reported that recent testing results on this exposure indicates that some 150,000 men (62% of those tested) are mostly

employed in the wood product manufacturing sector, especially if they work with formaldehyde-containing resins and glues. Women (some 12,000 of those tested) are usually exposed in hospitals, schools and clothing manufacturing.

Formaldehyde was identified as a priority substance in Canada in 1995. As of yet no regulatory actions have been taken under CEPA to reduce formaldehyde levels in indoor air, although some initial action to reduce the emissions have been taken under the Hazardous Products Act and Canada Consumer Product Safety Act. Efforts to address the health problems associated with formaldehyde grew out of the Urea Formaldehyde Foam Insulation (UFFI) problems, dating back to the mid-1980's, when high levels of formaldehyde were emitted from this form of insulation. Subsequently, the use of UFFI insulation was banned and ordered to be removed from households where it was already installed. Over time, guidelines were developed for reductions of formaldehyde in composite wood products, although as of yet, there is no enforceable standard under any regulation in Canada.

Rulings exist in the USA under the California Air Resources Board (CARB), and the US EPA TCSA Title Vl, which address the latest formaldehyde emission requirements in the United States together with requirements such as traceability and certification.The current limits established in the USA and to which Canada is wishing to harmonize are 0.05 to 0.13 ppm. Mexico is also considering similar regulations with a view to harmonizing trade in North America. The US regulations are the primary reference and model for designing the proposed Canadian regulations.

A Notice of Intent to develop regulations was published in the Canada Gazette Part 1 on March 18, 2017. Health Canada is now undertaking consultations and will publish the resulting proposed regulations intending to reduce formaldehyde emissions from composite wood products, produced both domestically and imported into Canada. The resulting regulation would reduce exposure of Canadians to formaldehyde from these products by reducing measurable levels in indoor air.

The full scale of the regulation involves materials that are manufactured, used, processed, sold or offered for sale, or imported products, as of the date that the regulation comes into force. The proposed regulations will be under section 93 (1) of CEPA, enabling the making of regulations with respect to a substance specified on the List of Toxic Substances in Schedule 1.

The multi-stakeholder workshop on September 6 involved in-depth discussion on possible alternatives to formaldehyde-based resins. Provisions for managing stockpiled products, third-party labelling and tracking of components and products, were all closely considered. Industry representatives called for precise outlining of the inclusions and exclusions in the current proposed regulations, and for clearly defined terms for consumer products to avoid confusion between standards in other jurisdictions and to increase compliance.

In the presentation given by HC it was noted that there are 12 composite wood panel mills, five of which are located in Quebec. There are also 10 hardwood plywood mills, nine being located in Quebec. Canadian composite wood panel mills represent a very significant business sector in

Canada, employing 11,500 workers with wages in the range of $724 million annually, and an overall impact to the economy of around $3.41 billion annually. Canada's exports are mainly to the United States with 61.6% consisting of structured panels and 56.7% being wood panels.

The products under consideration which may be implicated, include: engineered wood products, finished goods, hardwood plywood, laminated products, medium density fibreboard (MDF), oriented strand boards, particleboards, soft wood plywood, thin MDF, and waferboards. Those who may be affected by the regulation are: accreditation bodies, distributors, fabricators, importers, laminated project producers, panel producers, retailers, and third-party certifiers.

Any composite wood panel products containing formaldehyde that were manufactured or imported before the day on which the proposed regulations come into force would be exempted. Also there is a period in which these products are permitted to continue to be sold. There will be significant efforts across the industry to discourage the stock piling of such materials and also to avoid the dumping of such materials into the Canadian market from other jurisdictions Such as the US and Asia.

There were some 26 industry representatives attending the September 6 meeting in Ottawa. Several others were in attendance in the online format. These representatives felt that, for the most part, the larger Canadian industries are already in alignment with the US regulations. They felt that a good communication plan would be required to inform smaller businesses of the upcoming changes and to ensure a level playing field.

The biggest source of exposure to formaldehyde from these products is said to come from international suppliers, particularly from the Asia region. These suppliers are commonly unregulated and account for just over 50% of the Canadian market, including Plywood and other basic building materials, as well as laminated flooring, cabinets, household furnishings, etc. It is expected that the new regulation will stem and hopefully stop the flow of these unregulated products into the Canadian market. Big suppliers such as Home Depot, Walmart, Sears, etc. are already cognoscente of the upcoming proposed changes in regulations and will want to carry products that meet the highest possible standards.

Industry attendees asked for a full harmonization with the US on testing, labeling, record keeping and reporting. Their greatest expressed concern was that Canada might develop a slightly different level of regulation than the US. This would be an administrative burden to Canadian industry, and could double compliance costs.

Many industry representatives asked if the process of bringing in the regulation could be speeded up, given that Canadian manufacturers have made most of the required adjustments already. The faster the regulation comes into force, the easier it will be to keep Canadian industry competitive both at home and abroad. They report that industry has already spent millions of dollars in testing and product design in early efforts to become compliant with the US. This process has been ongoing for years already and with most of the work completed, it makes sense to industry members that the transition period should be shorter.

Health Canada representatives indicated that the process is already proceeding at the highest possible speed as a result of a Private Member's Bill that was recently introduced in the House of Commons calling for immediate action to develop enforceable regulations. The proposed regulation will have to be reviewed by Health Canada, Environment Canada (ECCC) and also the Justice Department and this all takes time. To this end, the proposed regulations will now go into a drafting phase. In the Fall of 2018 this draft will be published in the Canada Gazette, Part 1, followed by a public comment period of 60-70 days.

Industry representatives are extremely concerned that the regulations will not be in place until 2019-2020 (a year after the TSCA rule is active in the US). This is one of the reasons that the Government of Canada is taking steps to avoid the potential dumping of supplies by the US into Canada.

One industry representative pointed out that California is, in fact, "broke" and having difficulty enforcing their leading standard, so that many current US exports are not necessarily in compliance with the new ruling. For this reason, Canada plans to engage compliance and enforcement agencies early on, including the Canada Border Services Agency. Canada will call on the US to provide records demonstrating they followed the standards, but individual industry members questioned the potential for problems on this front. The importer's record will be an important piece of accountability in the chain of custody responsibility.

Labelling is an important, complicated and large issue which will be a critical component in guiding importers, retailers, the building industry and consumers. It was further noted that bilingual labelling required and is, in fact, a matter of constitutional law. Again it was emphasized that unregulated imported products are the biggest health concern for Canadians. Workshop attendees were reminded that breaking the law as stipulated in CEPA is a criminal offence which can lead to a fine or more serious legal action and will add some strength to enforcement challenges.

In terms of confidentiality of business information, it was clarified that companies would be required to divulge their constituent formulas to government, but that these would not be released to the public, for obvious competitive reasons.

The onus will be on the regulator to ensure that standards are being met. This sometimes involves deconstructive testing, where a product is taken apart to test all components. Industry wants there to be some level of oversight in this matter rather than just a paper trail. It was suggested that various component parts should be assigned a number so as to ensure reliability in product supply chains.

In terms of regulatory authority, importers will need to know the definition of hardwood versus soft wood veneers as they require different levels of formaldehyde. There is also a need to develop a method for evaluating new products and different technologies which can then be allowed readily into commerce if they meet the standard.

One industry representative pointed out that this proposed regulation will protect Canadian businesses and ensure their competitive advantage, with the added benefit of also protecting the jobs of Canadians.

There was considerable discussion on possible alternatives to formaldehyde, noting that neither soy based products nor pMDI perform as well as formaldehyde. Formaldehyde also acts as the superior preservative. For instance, if a soy based product is used, formaldehyde is still required to control the sugars contained in the bindings of that material. At this point in time there is no good or reliable alternative to formaldehyde in these products.

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