

REVIEW OF THE CANADIAN ENVIRONMENTAL PROTECTION ACT - CEPA 1999

SUBMITTED TO

**SENATE STANDING COMMITTEE ON ENERGY, THE ENVIRONMENT AND NATURAL
RESOURCES**

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Honourable Tommy Banks, Chair
Senate Standing Committee on Energy,
the Environment and Natural Resources

Members of Senate Standing Committee on Energy,
the Environment and Natural Resources
The Senate
Ottawa, Ontario
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To the Chair and Members of the Committee

RE: The Parliamentary Review of the *Canadian Environmental Protection Act* (CEPA 1999)

Introduction

Chemical Sensitivities Manitoba (CSM) would like to thank the Chair and the Committee for the opportunity to provide public comment on Parliament's Legislative Review of the Canadian Environmental Protection Act (CEPA 1999). CSM is a non-governmental environmental organization focusing on education and awareness with respect to Multiple Chemical Sensitivities (MCS).

The Canadian Environmental Protection Act (CEPA 1999) is fundamental to the protection of human health and the environment in Canada. Acknowledging the government's initiatives to decrease our exposure to toxic substances, Canadians are still concerned about the effects of pollution on human health and the environment. CEPA 1999 has shown throughout its existence, that areas within the Act are not very effective. Our continued exposure to hazardous substances including those from consumer/cosmetic products, require more definitive and timely action through the provisions of CEPA. There must be more tangible outcomes reached through clear goals, objectives and timelines for exposure reduction. Our well-being and the public interest should not be traded against the corporate dollar. While we observe the more obvious effects of chemical exposure, some may be misled by the apparent innocuous nature of some chemicals, particularly if there are long latency periods before ill effects materialize. This is an urgent call to the government for immediate action to act with precaution through prevention.

CSM would like to bring to the Committee's attention individuals with Multiple Chemical Sensitivities (MCS), who along with children and the older population, are amongst those in the general population who are particularly vulnerable to the exposure of toxic substances.

Although not totally inclusive, the issues listed below are recommended as some of the priority elements for this CEPA Review and are considered fundamental to the safe use of chemicals. Not only do they have the potential to impact on the chemically sensitive, but also on the population at large.

- Increased use and/or initiation of precaution to chemical use
- Timely chemical assessment
- Use and/or substitute with safer alternatives - in the home and workplace

Background information on MCS

Statistics from the 2000/2001 Canadian Community Health Survey indicate that approximately 2% of the Canadian population had physician-diagnosed MCS, a concern also found in the 1995 Nova Scotia (Canada) Health Survey, with 3% of the population reported being chemically sensitive. And in a 2005 U.S. national survey, it was found that approximately 11% of the population was unusually sensitive to common chemical products such as perfumes, pesticides, fresh paints and other petrochemical based products.¹

Although MCS does not have a diagnostic code, there is risk recognition by Canadian Federal agencies such as the Canada Mortgage Housing Cooperation and Canada Pension Plan. The provinces of Nova Scotia and Ontario have university affiliated environmental health clinics that assess patients and recognize the burden that toxic chemicals place on our bodies. Without a diagnostic code, people who are sensitive to air pollutants and other toxic substances and who satisfy the criteria for a MCS diagnosis, can nevertheless be misdiagnosed.

MCS is generally viewed as a medical condition that is avoidable and is closely linked to **chemical exposure**. MCS sufferers can feel victimized because the system that is in place to protect their health and the environment, has failed them. The reality is that there is an escalating percentage of our population that is negatively affected by our ever-increasing use of, and dependence on, toxic chemicals.

While there has been some MCS research in Canada, on the international front a considerable amount of effort and funds have been channeled into research so as to discredit MCS as being a physiological illness. And, one of the greatest obstacles for MCS validation has been the chemical industry. MCS does not follow the laws of classical toxicology nor does it fit into our current paradigm of illness/disease. At present, Health Canada has no active file on MCS and attempts to ensure that this medical condition gets the recognition that it so rightfully deserves have not been totally successful. Although MCS affects a small percentage of the population, this represents a minimum of least six hundred thousand Canadians; MCS is a chemical exposure - prevention issue the Committee should address.

The 1999 consensus definition used and referenced by researchers and health care professionals for establishing MCS, describes this condition as:

- 1) The symptoms are reproducible with repeated chemical exposure.
- 2) The condition is chronic.
- 3) Low levels of exposure result in manifestations of the syndrome (levels lower than those previously tolerated).
- 4) The symptoms improve or resolve when the incitants are removed.
- 5) Responses occur to multiple chemically unrelated substances.
- 6) Symptoms involve multiple organ systems.²

In addition to the above criteria, research at the University of Toronto determined some distinguishing symptoms, as follows:

- Having a stronger sense of smell than others
- Difficulty concentrating

¹ Caress SM, Steinemann AC. 2004. A National Study of the Prevalence of Multiple Chemical Sensitivity. *Archives of Environmental Health* June 59(6): 300-3005.

² 1999 Consensus on Multiple Chemical Sensitivity. *Archives of Environmental Health*, May/June 1999, Vol, 54, No. 3, based on: J.R. Nethercott, L.L. Davidoff, B. Curbow. "Multiple Chemical Sensitivity: Discriminant Validity of Case Definitions." *Archives of Environmental Health*, 1193: 48:19 26.

- Feeling dull or groggy
- Feeling spacey³

For further reference, this definition is posted on the Ontario College of Family Physician's website as a case criteria checklist, for the convenience of physicians.⁴

To reiterate, the focal point of this illness is **chemical exposure**. Not the higher exposure levels that we know to be harmful, with health outcomes that are reasonably well documented, but those lower dosages and the combinations thereof, that we are all subjected to on a daily basis. The environmental health clinics mentioned above have been proactive with regards to chemical use and advocate the use of safer chemicals. However, to solidify these areas of endeavour, the pertinent principles within CEPA, (precaution, timely assessment and substitution/safer alternatives) must be strengthened and enforced, and should appear as Committee recommendations for improving CEPA through better environmental and human health protection in Canada.

Elements for consideration

- **Increased use and/or initiation of precaution to chemical use**

A very basic principle in the assessment and management of toxic substances is the Precautionary Principle – one that takes into account the protection of human health and the environment.

There is sufficient scientific evidence to indicate that exposure to chemical mixtures can produce unexpected effects, including unpredicted organ attack, and in some cases, the effects are far greater than anticipated. Of significance are the observed adverse effects in response to a **combination** of chemical toxins at **low** concentrations but not to the individual chemical. This has been observed in several MCS cases⁵ and as well in some unexplained cancer clusters.⁶ Effects such as synergism, antagonistic and additive, are common when chemicals are in combination. While we cannot always predict all the effects, we must be aware of the possibility of their existence. As a result, Canadians could be misled into thinking that chronic low-level exposure to chemical toxins cannot be detrimental to their health.

Considering the above referenced data, there must be a conscious effort within CEPA to employ the precautionary principle with greater frequency. It must take precedence when considering exposure to more toxic substances as well as those that lack sufficient assessment data. This would reduce our exposure to toxic substances and better protect human life and the environment. Industrial and financial interest should not be at the forefront of government decision-making nor should it prevail over public health and concern for the environment. As the precautionary principle is often not initiated, Canadians are now

³ McLewon-Eyssen, G.E., Baines, C.J., Marshall L.M., et al. "Multiple Chemical Sensitivity: Discriminate Validity of Case Definitions." *Archives of Environmental Health*, 2001; 56(5):406-12.

⁴ Multiple Chemical Sensitivity, Case Criteria Checklist at <http://www.ocfp.on.ca/English/OCFP/Communications/publications/default.asp?s=1>

⁵ Zelinger, H.I. 2003. Toxic Effects of Chemical Mixtures. *Archives of Environmental Health* 58 (1) :23-29.

⁶ Zelinger, H.I. 2004. Unexplained Cancer Clusters: Common Threads. *Archives of Environmental Health* 59(4): 172-176.

burdened with providing the evidence of harm for the expanding list of substances in use. This burden of proof should lie with industry.

- **Timely chemical assessments**

Using the current mechanisms in CEPA, chemical assessments are not being completed in a timely manner, and unfortunately, the general population, and more so those who are at greater risk, continue to be exposed to toxic substances. There is little or no recourse for affected individuals. Illness, reduced quality of life, and the subsequent burden on society are daily realities. Lacking is an approach that would be sensitive to the recognition and needs of the vulnerable population and, at the same time, recognize the need for reduced or no exposure. Also, substances that are found to be persistent, inherently toxic or bio-accumulative require greater priority for assessment in CEPA.

With grouping of chemicals into appropriate chemical categories, the determination of data gaps at that point can reduce the assessment time. Also, using reliable, accurate assessment data from other jurisdictions, keeping abreast of scientific information in this area and constant communication with stakeholders could all reduce chemical assessment time but still ensure informed decision-making. Industry must be obligated to supply accurate and unbiased data about their chemicals; if not, the consequences for failing to do so should be well defined.

As previously mentioned, the precautionary principle is relevant in cases where there is insufficient data for a proper assessment. Even with sufficient scientific data for assessment, it is recognized that there can be some degree of uncertainty – science is not absolute. Transparency in the process of chemical assessment is important, particularly with respect to concerned stakeholders.

One example of documented MCS health effects relates to airborne mycotoxins, a determination that followed some skepticism by authorities constrained by a purported need for ‘absolute science’. Exposure related to airborne mycotoxins presented in persistent multiple health-related complaints over at least a 10 year period by the majority of staff at a newly-designated historic Court of Appeal building in Calgary.⁷ The building was closed in January 2001 due to the presence of air contaminants that affected the occupants’ health. Unfortunately, by the time the mycotoxin risk was realized, the damage had already been done to the health of occupants of the courthouse. Some of the staff was later diagnosed with MCS. Increasing asthma and allergy medications did not appear to be as effective in relieving their symptoms.

The staff was eventually relocated to a new facility in which their needs for a much more benign chemical environment were respected. To avoid cross-contamination, nothing was removed from the contaminated workplace. These measures resulted in a substantial cost to the government of Alberta, the affected individuals and their families. The economic cost and suffering endured were largely the result of a lack of precaution and the misplaced need for proof from ‘absolute science’.

Ill health from exposure to indoor mycotoxins is not uncommon or new. Mycotoxins are toxic compounds produced by fungi. Some of the health effects include disruption of the central nervous system and carcinogenicity. CSM has often witnessed negative health effects due to home and workplace mycotoxin exposure. There should be provisions within CEPA to address the exposure to these toxins as they pose serious health risks to the occupants of mould-affected workplaces and homes.

⁷ Tang, G.L. 2003. Health Symptoms Caused by Molds in a Courthouse. *Archives of Environmental Health* 58(7): 442-446.

- **Use or substitute with safer alternatives - in the home and workplace**

As consumers, we continue to use toxic substances or toxic-containing products and assume that they are safe to human health and the environment because they are readily available in the marketplace. This is a fallacy. The unsuspecting public has access to these products because of the lack of legislation to adequately control, label, ban or otherwise restrict these products. There should be provisions under CEPA to adequately deal with and provide clear, easily understood information on toxic or harmful chemicals in consumer products. Unlike other jurisdictions, such as the U.K., many consumer products are inadequately labelled and do not reflect the presence of toxic or potentially toxic substances – unless the consumer is a chemist who can decipher chemical names! Pesticides, volatile organic compounds (VOCs), some heavy metals, phthalates (plasticizers), coal tar derivatives, polybrominated diphenyl ethers (PBDEs) are just some of the common toxic substances that we encounter in our daily lives. While the toxic effects from a specific chemical may be known, they are not adequately described, neither are the safer alternatives or substitutes.

Chemical Sensitivities Manitoba has been involved in the recent initiatives by Environment Canada to reduce volatile organic compounds (VOCs) in consumer and commercial products. VOCs contribute to the formation of smog - a major component of air pollution, which negatively affects our health and in particular, the health of the sensitive population including those with MCS. From these consultations, it is clear that there must be mandatory legislation for VOC emissions reduction, with clear goals and objectives to be achieved via set timelines and performance measurements. CSM strongly believes this is necessary as it would appear through the bureaucratic consultation exercise that definitive action to better protect environmental and human health is not a priority concern, although the link between public health and VOC exposure is well documented and would appear to be of significance to Canadians, but not to industry and the government.

This is unacceptable intransigence by government. In 2005, the Ontario Medical Association estimated that air pollution, notably fine particulate matter (PM) and ground level ozone, will be responsible for increased emergency room visits, premature deaths, hospital admissions, and absenteeism from work with a cost of at least \$1billion to Ontario/year.⁸ More recently, health effects were observed at levels of PM originally thought to be safe. There appears to be no apparent safe threshold for exposure to these air pollutants. Also, recent epidemiological studies indicate higher rates of atherosclerosis in locations that record higher levels of 'ultrafine' PM.⁹ Childhood asthma rates have risen significantly and cancers that are environmentally linked, are also on the rise. We cannot ignore this mounting body of evidence. Government must not continue to delay; better public protection is required.

In the workplace, workers are exposed to many toxic substances even though they are adhering to the Threshold Limit Values (TLVs) for safe exposure. The TLV applies to an individual chemical but in reality, workers are usually exposed to multiple chemicals in any workday. Compounding the environmental risk is the fact that some workers are sensitive to toxic substances well below the respective TLV and, therefore, cannot be adequately protected in the workplace. Why must the Canadian workforce continue to be exposed to toxic chemicals? Exposure is the issue here - not the duration or the concentration.

⁸ Ontario Medical Association, 2005. OMA Ground Level Ozone Position paper. On line: www.oma.org/phealth/ground.htm

⁹ Lettner, Cheryl. 2006. Presentation: Health Effects of PM/Ozone – VOCs in Architectural and Industrial Maintenance (AIM) Coatings, Toronto, ON. Environment Canada.

In the home and workplace environments, toxic substances should be substituted with safer products. If this is not feasible, reduction or removal of use is the next best fit. CEPA should be instrumental in this switchover and provide a consistent mechanism as we expect increasing numbers of substances to be identified as CEPA-toxic. For example, in the successful cases of VOC emissions reduction, reformulation, ingredient substitution and the emerging wonders of 'Green Chemistry' have been employed. As in the case of paints and some consumer products, water-borne technology has been utilized in order to reduce VOC emissions. There must be emphasis for the safe substitution of toxic chemicals and Canadians must be encouraged to use safer products in the home and the workplace.

Conclusion

CEPA 1999 has many areas within its framework that are weak and ill-defined. While only a few have been mentioned in this submission, specific to MCS concerns and issues, other ENGO submissions have highlighted the many elements within CEPA that require consideration and action by the Committee during this CEPA Review. There is an obvious need for better protection of human life and the environment, and this can be adequately addressed and acted upon by this Review. In the Committee's CEPA report to Parliament, CSM looks forward to seeing mention of multiple chemical sensitivity (MCS) as an issue raised by the public and addressed in the Review, as but one of the myriad of negative impacts resulting from chemical exposure.

Chemical Sensitivities Manitoba, our colleagues and supporters would like to thank the Committee for this opportunity for public participation in the CEPA 1999 Review.

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