

Summary of Public Comments received on the Challenge substance Methyl chloride (CAS 74-87-3) Draft Screening Assessment Report for Batch 6

Comments on the draft screening assessment report for Methyl chloride to be addressed as part of the Chemicals Management Plan Challenge were provided by Crooked Creek Conservancy Society of Athabasca, Reach for Unbleached , Inuit Tapiriit Kanatami, Chemical Sensitivities Manitoba and Canadian Environmental Law Association.

A summary of comments and responses is included below, organized by topic:

- Risk Assessment
- Risk Management

TOPIC	COMMENT	RESPONSE
Risk Assessment	Additional and more recent Canadian environmental monitoring, especially in the vicinity of methyl chloride “hot spots,” should be undertaken.	Air is the main medium of exposure and both indoor and ambient air data used in the assessment are recent (i.e, less than 5 years old.)
	Methyl chloride should be managed in such a way that occupational exposure is minimized and population variability is taken into account.	Population variability is taken into consideration by characterizing exposure to various age groups in the general population. As well, when characterizing risk to human health, the adequacy of the margins of exposure take into consideration intraspecies variability. Occupational exposures are not characterized in the screening assessments, as the focus of the assessments is on general population exposures. Hazard information obtained from occupational settings, in particular epidemiological information, is considered when available in the screening assessments. The information developed through the CMP process may be used to inform decisions concerning additional actions to minimize exposure to workers. CMP is working to communicate results to appropriate occupational health and safety jurisdictions.
	The margins of exposure are considered low and do not take all potential exposure pathways into account. This could result in margins that would be inadequately protective, especially of vulnerable	The derived margins of exposure (2430-6990) are based on conservative estimates of exposure (including use of maximum measured concentrations of methyl chloride in ambient and indoor air) and are considered to be adequately protective to account for

	populations.	uncertainties in the human health effects and exposure databases .
	The risk assessment was arrived at in the face of great uncertainty about the use, disposal, production and emission of methyl chloride in Canada.	Producers, users and importers of methyl chloride in excess of threshold quantities were required to respond to the section 71 notice published in the Canada Gazette. In the absence of adequate information on the importation of methyl chloride and the production of methyl chloride through combustion of fossil fuels and biomass, estimates of emissions were prepared for those industry sectors expected to be the largest producers of methyl chloride resulting from combustion. With respect to the human health risk assessment, based on the physical-chemical properties of methyl chloride, inhalation is expected to be the primary route of exposure. Canadian data on concentrations in ambient and indoor air were used to characterize general population exposure and risk.
	The conclusion of the screening assessment is not sufficiently precautionary.	A conservative margin of exposure for non-carcinogenic effects of 2430 was calculated using the lowest effect level in experimental animals, and the upper-bounding estimate of total daily intake for the most highly exposed age group. Margins of exposure for other subpopulations were higher. The margins of exposure are considered to be adequately protective to account for uncertainties in the human health effects and exposure databases for both cancer and non-cancer effects.
	Inadequate attention was paid to vulnerable populations, including those living and working in the vicinity of the highest emissions of methyl chloride and northern communities.	The upper-bounding estimates are calculated using maximum concentrations in environmental media. These estimates are accordingly considered protective of those individuals living near industrial emission sources. It is not expected that individuals in northern communities would be exposed to methyl chloride in excess of these upper-bounding estimates.
	Results of the screening assessment differ from the initial categorization decision.	The purpose of categorization was to identify priorities for assessment and the approaches used in categorization were suitable for application to the large number (approximately 23,000) of substances on the Domestic Substances List. These approaches are described in detail on the Government of Canada's

		Chemical Substances website: (http://www.chemicalsubstanceschimiques.gc.ca/). A screening assessment is based on review of all available information, including new information submitted through the Challenge survey and questionnaire. The screening assessment conclusions reflect the outcome of that assessment process.
	Empirical toxicity data are limited and, in some cases, have uncertainty associated with them.	Uncertainties associated with the empirical aquatic toxicity data cited in the assessment are acknowledged; however, these data were considered acceptable for use and form one line of evidence in the evaluation of the potential for risk to the environment. Other lines of evidence include modelled aquatic toxicity values (which are in good agreement with the empirical data), evidence of low toxicity to non-aquatic species, evidence of low bioaccumulation potential, and low measured environmental concentrations. Considered together, these data indicate that concentrations of methyl chloride in the environment are unlikely to reach levels sufficient to elicit adverse effects in organisms and, for this reason, it is considered that methyl chloride does not pose a risk to the environment. Similarly, while the database of empirical toxicity values for non-aquatic species is not large, the available data were considered in the larger context of other lines of evidence that together led to the determination that the substance does not meet the definition of “toxic” as set out in section 64 of CEPA 1999.
	Methyl chloride is considered to contribute to the destruction of stratospheric ozone.	While the action of methyl chloride on atmospheric ozone was examined, it was considered that any potential impacts of the substance that relate to ozone depletion can be effectively managed under existing programs already in place for the global management of the risks posed by ozone-depleting substances.

	The risk assessment should also consider breakdown products.	Breakdown products are addressed in screening assessments if sufficient information is available and there is an indication that these products are hazardous. For most substances in the Challenge, including methyl chloride, the available data are insufficient to conduct a cumulative risk assessment which incorporates consideration of all potential degradation and transformation pathways and products. Therefore, the assessment of risk focuses on the potential of the parent product to be present in the environment at exposure levels that are sufficient to elicit adverse effects.
Risk Management	Risk management should include occupational exposure.	The Challenge screening assessments are based on considerations of the available data. The various conservative exposure scenarios used are considered to be protective of vulnerable populations in Canada. However, if information is available which suggests that a specific sub-population would be particularly vulnerable, this information would be considered in the assessment. Hazard information obtained from occupational settings, in particular epidemiological information, is considered in the risk assessment. The information developed through the CMP process may be used to inform decisions concerning additional actions to minimize exposure to workers. CMP is working to communicate results to appropriate occupational health and safety groups.
	Exposure from waste streams is a concern.	Methyl chloride rapidly volatilizes from surface waters, and therefore would quickly transfer to the air compartment, considered the most significant source of exposure in the assessment.
	Propose safer alternatives for use in consumer products.	Assessment of available data indicates that consumer products are not expected to pose a significant contribution to exposure, and therefore consideration of alternatives at this time would not be warranted.
	Point source releases should be managed.	Ambient data available for methyl chloride in Canada are plentiful, and quantification of exposure at the highest air concentrations indicates that the margins of exposure would be

		acceptable and protective against health effects associated with methyl chloride
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