



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Director
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Environment Canada
351 St. Joseph Blvd., 12th Floor
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Re: Regulating PBDEs (brominated flame retardants) in Canada.

In response to Environment Canada's consultation on a proposed **Polybrominated Diphenyl Ethers** (PBDEs) Risk Management Strategy, we offer the following comments.

The federal government has proposed to add seven PBDE chemicals to Schedule 1 of the *Canadian Environmental Protection Act*, CEPA, that is, to designate them as toxic substances under this law. However, the government proposes to seek virtual elimination of only three out of the seven substances in this group. While we support the immediate addition of all seven to Schedule 1, we also recommend their addition as soon as possible to Schedule I ("Prohibited Toxic Substances") of the *Prohibition of Certain Toxic Substances Regulations, 2005*.

The choice to ban (or virtually eliminate) these three substances, without addressing the other four, is a hollow move, affecting only two PBDE commercial mixtures (known as pentaBDEs and octaBDEs) for which North American manufacturing ceased over two years ago.

This regulatory approach simply maintains the currently unacceptable status quo. It avoids the real problem; that is, the need to eliminate the remaining, and increasing, production and use of the decaBDE commercial mixture of PBDEs.

We offer more specific comments below in each of the following areas:

1. The scientific evidence about PBDEs is sufficient to warrant a complete ban on all the individual PBDEs used in all commercial mixtures.
2. The regulatory proposal published in July 2006 to regulate PBDEs, and the associated Risk Management Strategy, simply maintains the status quo – a hollow and irresponsible approach.
3. The regulatory proposal and the proposed Risk Management Strategy do not satisfy the requirements of the *Canadian Environment Protection Act*. As persistent, bioaccumulative and toxic substances, all PBDE formulations should be added to Schedule I ("Prohibited Toxic Substances") of the *Prohibition of Certain Toxic Substances Regulations, 2005*.
4. The proposed Risk Management Strategy omits a key aspect of risk management – ensuring public awareness about ongoing risks from the pervasive occurrence, and legacy, of extremely common consumer products containing these toxic substances.

5. The proposed Risk Management Strategy does not provide adequate details regarding the the identification and promotion of safe substitutes.
6. Disposal of PBDEs will be a potential source of other toxic substances.

1. The Scientific Evidence Warrants a Complete Ban

There are multiple instances in the regulatory proposal and again in the proposed Risk Management strategy where the scientific information used to justify the proposed decisions is out of date or incomplete. Cited sources are almost entirely from 2002 or earlier. Few are from 2003 and none are more recent. Moreover, even where these documents appropriately note relevant scientific information, that information does not correctly inform the decisions made. For example:

- Since the publication of the State of the Science for a Screening Assessment Report on the seven PBDEs under consideration in the proposed regulations and RM strategy, a large body of evidence has continued to be published concerning the exposure circumstances of PBDEs, suspected health impacts, human breast milk levels, contamination of the environment and biota, etc. Throughout these documents there is inadequate consideration of the following:
 - Scientific evidence pointing to indoor dust, including inside vehicles, as a significant exposure pathway for humans, particularly children. The proposed RM strategy seriously understates this problem.
 - The rapid and continuing rise in levels of PBDEs in breast milk in women in Canada.
 - Scientific evidence that decaBDEs are persistent and bioaccumulative and that they break down in the environment into the lower brominated PBDEs that are slated for virtual elimination.
 - The correspondingly rapid rise in PBDEs in biota, including decaBDE, incorrectly assumed to be less persistent or bioaccumulative than the lower brominated PBDEs.
 - Scientific evidence pointing to the possibility of multiple health impacts, including developmental neurotoxicity and impacts on the hormonal, immune, developmental and reproductive systems, as well as possible carcinogenicity. The approach of focusing on a single critical effect, namely developmental neurotoxicity, undermines the urgency of addressing substances for which multiple health impacts are suspected.
- The government documents note that there is a weight of evidence that deca-BDE breaks down in the environment to exactly those lower brominated PBDEs that are recommended for virtual elimination. Yet, the government reports and regulatory conclusions exclude decaBDE, (and the component BDEs in the decaBDE commercial mixture), from the recommendation for virtual elimination. This contradiction is not supportable even in the context of the science reviewed in the State of the Science report. Moreover, there is more recent evidence in the scientific literature concerning the ability of decaBDE to break down into the lower brominated BDEs.

- The State of the Science report, the regulatory proposal and the proposed Risk Management Strategy all note that the seven PBDEs under consideration are similar and should be considered using a category approach. Yet, a category approach is not followed. Instead, a distinction is made between the substances already discontinued (the pentaBDE and octaBDE commercial mixtures), and those that remain in increasing use (the decaBDE commercial mixture). The decision to focus on the already discontinued PBDEs for virtual elimination is a cop-out. It addresses an already shrinking problem and appears to be a decision based far more on expediency for affected industries; it is not justifiable from the scientific evidence. The appropriate response to a category of substances for which there is steadily increasing evidence of significant toxicity, persistence and bioaccumulation, is to treat them all the same. The appropriate response, therefore, is not only their addition to Schedule 1 of CEPA 1999, the List of Toxic Substances, but their addition thereafter to Schedule I (“Prohibited Toxic Substances”) of the *Prohibition of Certain Toxic Substances Regulations, 2005*.

2. Regulating the status quo is dishonest and inadequate.

As noted, the State of the Science report on PBDEs is now nearly three years old and is based on outdated science. The subsequent Risk Management strategy proposed under CEPA, and currently the subject of consultation, will have us talk about this urgent problem for another two years at least. Then we might consult further on regulations to ban the PBDE mixtures that were discontinued by major US-based manufacturers two years ago, and that have been banned in Sweden for over eight years.

The Canadian Environmental Law Association (CELA) jointly with Environmental Defence wrote to Minister David Anderson in a letter dated June 9, 2004 “asking the government to use the full authority of the Canadian Environmental Protection Act, and in particular, its authority under Section 94 of the Act, to phase out PBDEs in the production of consumer products and direct resources to find safe alternatives for flame retardants. We believe urgent action is required,...an expedited process is warranted...” Canada has lost ground in these efforts.

Meanwhile, right now, Sweden and other progressive European countries are seeking to ban the real problem; that is, they want to ban the decaBDEs still in production. Canada’s regulatory proposal of last summer would simply enshrine the status quo. Even though another three more years might pass before the proposed regulations and Risk Management Strategy are put in place, the proposal simply sets a minimal target that is easily met, while the real problem remains unaddressed.

3. The regulatory proposal and the proposed Risk Management Strategy do not satisfy the requirements of the *Canadian Environment Protection Act*.

Given the evidence about decaBDEs as toxic, persistent and bioaccumulative, there is no scientific justification for not applying the same regulatory treatment to the entire category of PBDEs. That is, all seven PBDEs slated for addition to Schedule 1 should also be slated for

virtual elimination. They should be added to Schedule I (“Prohibited Toxic Substances”) of the *Prohibition of Certain Toxic Substances Regulations, 2005*.

4. The government’s responsibility for raising public awareness about ongoing hazards is being neglected.

Scientific evidence increasingly confirms that PBDEs are present as contaminants in our indoor environment, including our vehicles. Levels of PBDEs in accumulated dust and dirt constitute a primary exposure medium. These are essentially “hidden” exposures about which educational awareness is a key component of any risk management strategy.

Action on PBDEs should be accompanied by an effective strategy for preventing risks to the public. This is an area where the risk management falls seriously short.

Risk management of toxic, persistent and bioaccumulative substances should also place significant emphasis on addressing PBDE releases from the millions of products that currently sit in every room of every house and building in Canada, and in just about every vehicle. Simply talking about the disposal of these products is not enough, since PBDEs are incorporated into a myriad of items that will not be disposed of for many years. There is increasing evidence that products are releasing PBDEs into our indoor environments, largely partitioning to dust. In addition, certain products will release more PBDEs than others, especially in a deteriorated condition (as can occur under conditions of poverty) such as foam in many types of bedding and furniture.

Public awareness about these exposure sources and their remediation is very important and is a crucial aspect of any risk management strategy. The fact that PBDEs have been incorporated into so many varied consumer products for approximately 30 years presents a legacy of contamination that has multiple implications for public health and safety. Similar to the legacy created by many decades of lead-containing paint, ongoing public awareness is necessary about these indoor exposure sources and pathways, particularly for children and pregnant women.

The need for public awareness on PBDEs should extend to transparency and access to information. The risk management strategy notes that Canada has been following decaPBDE release trends through the National Pollutant Release Inventory program. We find it disturbing that the data was being collected by Canada’s only repository for pollutant releases and transfers. We urge the government to release these data immediately and require that reporting for all PBDEs be required in the upcoming 2005 data of the NPRI.

5. Alternatives to PBDEs should be inherently safer than what they are replacing.

The proposed Risk Management strategy is focused on facilitating discussions to find alternatives to the rising use of deca-BDE commercial mixtures. Such discussions are important and should be fully implemented immediately despite the fact that CEPA timelines for implementing management tools is several years away.

We strongly support the need to initiate a process to identify and evaluate alternatives. We are concerned about the emphasis placed on alternatives as outlined in the risk management plan. Currently, it provides emphasis on economic consideration of alternatives and provides little to no discussion on safety to humans and the environment concerning toxicity of possible alternatives. The efforts to identify and promote alternatives should focus on ensuring that proposed alternatives meet rigorous criteria for safety to humans and the environment. This work should begin immediately. The regulatory action on PBDEs will place urgency on the need to identify alternatives, only if defined timelines are imposed for eliminating PBDEs.

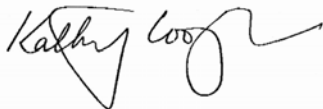
6. The risk management strategy fails to provide adequate details on ensuring safe disposal of PBDE-containing products.

It can be assumed that a large volume of PBDE-containing waste will continue to go to landfills for many decades. Even with carefully engineered landfills, this volume of waste constitutes an enormous and potentially dangerous legacy of significant environmental contamination. Of even greater concern is waste disposal via incineration. CELA strongly opposes the incineration option as it leads to the production of other toxic substances including heavy metals, dioxins and furans and other pollutants depending on the type of product being incinerated. Despite the observation in the proposed Risk Management strategy that “5% of solid waste disposal in Canada” is incinerated, the by-products of incineration may have long lasting contributions to the growing levels of toxic substances found in the environment and humans. The limited options available for disposal of products containing PBDEs underscore the need for Canada to focus on banning all PBDEs from all sources including in consumer products. Consideration should also be given to retail and manufacturer recycling and take-back options, for isolating and managing as hazardous waste at least part of the PBDE-containing waste stream.

Canada’s approach should not be limited to domestic use of PBDEs. It is necessary for Canada to begin addressing the legislative shortfalls of CEPA, and how toxic substances in products are managed ineffectively. Stringent requirements are warranted to prevent the entry of products containing PBDEs in products from other jurisdictions. Canada continues to side step the need for such action, as displayed in its proposed risk management strategy for fluorotelomer based substances and perfluorinated octanoic sulfonates announced last summer.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION



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