



August 22, 2006

Hon. Rona Ambrose
Minister of the Environment
House of Commons
Ottawa, ON K1A 0A6

Re: *Canada Gazette, Part 1, July 1, 2006*

Order Adding Toxic Substances to Schedule 1 to the Canadian Environmental Protection Act, 1999 – Polybrominated diphenyl ethers

Dear Minister Ambrose,

Thank you for the opportunity to submit our comments on the proposed Order regarding polybrominated diphenyl ethers (PBDEs).

Based on the findings of the PBDE assessment reports that:

- the seven PBDEs on the Domestic Substances List (DSL) - tetraBDE, pentaBDE, hexaBDE, heptaBDE, octaBDE, nonaBDE and decaBDE, which are found in commercial PeBDE, OBDE and DBDE – are toxic based on environmental considerations, as defined by section 64 of CEPA, 1999, and that
- tetraBDE, pentaBDE and hexaBDE meet the criteria outlined in the Persistence and Bioaccumulation Regulations of CEPA 1999,

Environmental Defence strongly supports adding the seven PBDEs on the DSL with the molecular formula $C_{12}H_{(10-n)}Br_nO$ in which $4 \leq n \leq 10$ to Schedule 1 to the Canadian Environmental Protection Act, 1999.

Furthermore, Environmental Defence supports the Ministers of Environment and Health proposal (outlined in a Notice in the *Canada Gazette* on July 1, 2006) to implement virtual elimination for PBDEs that have the molecular formula $C_{12}H_{(10-n)}Br_nO$ in which $4 \leq n \leq 6$ (tetraBDE, pentaBDE and hexaBDE, which are the main components of the commercial PBDE mixture Pentabromodiphenyl Ether – PeBDE). We look forward to the official publication of such a regulation and expect an expeditious timeline for virtual elimination.

We are, however, disappointed that, as outlined in the *State of the Science Report for a Screening Health Assessment* for PBDEs, a “more in-depth evaluation of PBDEs from a human health perspective is considered a low priority, unless information becomes available to indicate that measures recommended to control exposure of environmental organisms to PBDEs will not be protective for human health”. According to the Report, the evaluation of the relevant data was insufficient for establishing a safe margin of human exposure to PBDEs. In addition, establishing such a margin would require the development of additional, more meaningful information on population exposure to PBDEs.

Environmental Defence’s own study on the pollution in Canadian families, *Polluted Children, Toxic Nation*, measured the concentration of five PBDEs in the plasma of seven children (aged 10 to 15 years) and six adults (up to the age of 66), and found that in several cases the children were more contaminated by PBDEs than their parents (Table 1). The detection of higher levels of PBDEs in children is of particular concern because children may be more vulnerable to the harmful effects of toxic chemicals. To protect current and future generations

from the potential adverse health effects of PBDEs it is important that we understand how these chemicals act in the bodies of people, young and old, and ensure that regulations on PBDEs reflect those health-related findings.

Table 1. Comparison of median PBDE concentrations detected in Canadian children and their parents ($\mu\text{g/L}$ in plasma)

	PBDE 153	PBDE 47	Total PBDEs*
Children	0.029	0.078	0.118
Parents	<0.010	0.042	0.042

*includes PBB 153, PBDE 100, PBDE 153, PBDE 47, and PBDE 99

We urge the government to approve further evaluation of PBDEs from a human health perspective for several other reasons, as well. There is no guarantee that the measures to control the exposure of environmental organisms to PBDEs will be protective of human health. In fact, based on the government's current trend towards exempting manufactured items from prohibitions on toxic substances it is possible that some PBDEs may continue to be used in consumer products used by the Canadian population. Moreover, until a risk management strategy, regulation(s) and/or prohibition(s) or other control measure are introduced for PBDEs it is premature to assume that these measures will be protective of human health, particularly since it is likely that they will be developed for the main purpose of protecting environmental organisms, rather than people. A further evaluation of PBDEs from a human health perspective could potentially be useful for evaluating whether any proposed control measures are sufficient for protecting human health. By taking a leadership role in researching and phasing out PBDEs, Canada can also help to lead the international community towards the reduction of PBDEs in the global environment.

We welcome the government's recent initiatives regarding the management of toxic substances under CEPA. We trust that you will consider our comments regarding PBDEs and we look forward to working with you to ensure a less toxic future for Canada.

Sincerely,



Rick Smith, Ph. D
Executive Director
Environmental Defence

CC:

Ms. Danie Dubé
Existing Substances Division
Department of the Environment
Ottawa, ON K1A 0H3
danie.dube@ec.gc.ca;
ESB.DSE@ec.gc.ca

And

Hon. Tony Clement
Minister of Health
House of Commons
Ottawa, ON K1A 0A6