

**Submission on Canada Gazette Notice Part I Vol. 143,  
No. 26 — June 27, 2009**

Proposed Order Amending Schedule I to the Hazardous  
Products Act (bisphenol A)

August 10, 2009

Submitted to Health Canada by Environmental Defence

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**Re: Proposed Order Amending Schedule I to the Hazardous Products Act (bisphenol A) as per Canada Gazette Notice Part I Vol. 143, No. 26 — June 27, 2009**

**Adding BPA to Part I Schedule I of the Hazardous Products Act**

Environmental Defence applauds the federal government for its proposed Order adding polycarbonate baby bottles that contain 4,4'-isopropylidenediphenol (bisphenol A) to Part I of Schedule I of the *Hazardous Products Act*. Environmental Defence agrees with the final screening assessment conclusions that both humans and other organisms appear sensitive to BPA's effects, and that present environmental levels may be causing harm. Enabling the development of measures to manage human health and environmental risks posed by BPA is considered to be of utmost importance.

**Next Steps**

There is strong evidence suggesting that a more extensive risk management plan than that proposed is needed. While measures proposed within the risk management scope and approach documents remain endorsed and supported by Environmental Defence, we feel that action following the addition of BPA to the List of Toxic Substances must go further.

The need for additional risk management action is clear given the long list of BPA uses and potential sources of exposure noted within the final assessment. Given evidence that BPA may be found in concentrations up to 385 ppb in US canned foods,<sup>1</sup> that breast milk levels may be almost as high as those in canned infant formula,<sup>2</sup> that BPA may accumulate in the fetal compartment,<sup>3</sup> and that the fetus may be more vulnerable to BPA than adults,<sup>4</sup> measures protecting the fetus by reducing pregnant women's exposure are needed.

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<sup>1</sup>Government of Canada. Final Screening Assessment for Phenol, 4,4'-(1-methylehylidene)bis- (BPA, CAS No. 80-05-07). October 2008, p.35.

<sup>2</sup> Ibid, p.38

<sup>3</sup> Ibid, p.58

<sup>4</sup> Ibid, p.73

Concern is such that the State of Connecticut passed a bill that bans BPA beyond baby bottles. H.B. No. 6572, which was passed on June 3, 2009, calls for a ban on BPA in infant formula and baby food cans and jars, as well as all reusable food and beverage containers.<sup>5</sup> This law, which becomes effective on October 1, 2011, was passed with only one vote in opposition and similar Bills are now pending in California, Michigan, and New York.<sup>6</sup> Broader bans are also being considered federally in the United States, with Senator Diane Feinstein and House Representative Edward Markey introducing bills that call for a nationwide ban on BPA in food and beverage containers.<sup>7,8</sup>

House dust is another significant potential source of exposure as preliminary data from the ongoing Canadian House Dust Study showed BPA in the house dust of 99% of Canadian households. The median concentration of 1600 ppb and the maximum of 23,840 ppb in house dust are noteworthy.<sup>9</sup> Given that household consumer products are likely responsible for these levels, reduced BPA use in such products (e.g., cosmetics) would be an important part of risk reduction.

Exposure may also occur via the use of dental products, sludge for agricultural purposes, and water pipes. Research on the release of BPA from dental products showed concentrations of BPA in saliva of up to 105.6 ppb at 1 hour and 3 hours.<sup>10</sup> Concentrations as high as 40 mg/kg of BPA were reported in municipal wastewater sludge collected from sewage treatment plants across Canada.<sup>11</sup> Additionally, the final assessment notes that water pipes may be a reservoir for BPA.<sup>12</sup>

Overall exposure for two- to five-year olds in North Carolinian daycares and homes was estimated to be as high as 1570 mg/kg/day.<sup>13</sup> Further to this, a recent study which showed that BPA either lingers longer in the body than previously thought or there are "substantial" non-food exposures, suggests exposures are likely higher than previously

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<sup>5</sup> Connecticut General Assembly. Public Act No. 09-103, an Act Concerning Banning Bisphenol-A in Children's Products and Food Products, Session Year 2009, H.B. No. 6572. Retrieved from [www.cga.ct.gov/2009/ACT/Pa/pdf/2009PA-00103-R00HB-06572-PA.pdf](http://www.cga.ct.gov/2009/ACT/Pa/pdf/2009PA-00103-R00HB-06572-PA.pdf) on August 5, 2009.

<sup>6</sup> Clean Water Action. Toxic Chemical Bisphenol-A (BPA) Banned In Connecticut: State Action Sends Message that the Public Supports Safer Products. June 3, 2009. Retrieved from [www.cleanwateraction.org](http://www.cleanwateraction.org) on July 16, 2009.

<sup>7</sup> Senate. Ban Poisonous Additives Act of 2009, to ban the use of bisphenol A in food containers, and for other purposes, 111<sup>th</sup> Congress, 1<sup>st</sup> session, 2009, S. 593. Retrieved from <http://thomas.loc.gov/> on August 5, 2009.

<sup>8</sup> House. Ban Poisonous Additives Act of 2009, to ban the use of bisphenol A in food containers, and for other purposes, 111<sup>th</sup> Congress, 1<sup>st</sup> session, 2009, H.R. 1523. Retrieved from <http://thomas.loc.gov/> on August 5, 2009.

<sup>9</sup> Government of Canada. Final Screening Assessment for Phenol, 4,4'-(1-methylethylidene)bis- (BPA, CAS No. 80-05-07). October 2008, p.45.

<sup>10</sup> Ibid, p.48

<sup>11</sup> Ibid, p.25

<sup>12</sup> Ibid, p.6

<sup>13</sup> Ibid, p.54

thought.<sup>14</sup> Currently known exposure levels and new available evidence warrant a broad-based risk reduction approach to address exposures.

## **Recommendations**

1. The Government of Canada should, as proposed, order the addition of BPA to the List of Toxic Substances under CEPA, both for its impacts on ecosystems and its risk to human health.
2. The government should revise its risk management plan to address the broader use of BPA in order to minimize environmental and health-related risks to the Canadian population, fetuses, and breast-fed children. This plan should include:
  - a. The elimination of BPA-containing food and beverage containers that create direct exposures via their addition to Part I of Schedule I of the *Hazardous Products Act*.
  - b. The elimination of BPA use in consumer products which contribute to house-dust BPA levels via their addition to Part I of Schedule I of the *Hazardous Products Act*.
  - c. Analysis of how polycarbonate water pipes might increase human and environmental exposure to BPA. If there is significant risk of exposure to BPA through water pipes, they should be also be added to Part I of Schedule I of the *Hazardous Products Act*.

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<sup>14</sup> Stahlhut, RW; Welshons, WV; and Swan, SH. Bisphenol A Data in NHANES Suggest Longer than Expected Half-Life, Substantial Nonfood Exposure. *Environmental Health Perspectives*. Volume 117, Number 5, May 2009.

**Appendix A:** List of recommendations in response to the proposed Order to add BPA to Schedule 1 to the Canadian Environmental Protection Act, 1999. The submission was made on July 7, 2009.

1. The Government of Canada should, as proposed, order the addition of BPA to the List of Toxic Substances under CEPA, both for its impacts on ecosystems and its risk to human health.
2. The government should revise its risk management plan to address the broader use of BPA in order to minimize environmental and health-related risks. This plan should include the elimination of BPA-containing food and beverage containers that create direct exposures.
3. There is evidence that BPA may accumulate in the fetal compartment and that levels of exposure may be higher than for other stages of life. Protecting the fetus should therefore be a key focus of risk management activities preventing harm to human health.
4. Given that levels of BPA in breast milk can be almost as high as those found in infant formula the protection of infants must go beyond the elimination of polycarbonate baby bottles and infant formula containers to include reducing breast milk levels.
5. There is significant evidence for environmental harm at present levels of environmental release. Risk management of BPA should therefore involve a broader reduction of use and release including substitution with safer materials.
6. Given the high levels of BPA found in house dust there should be a particular emphasis on reducing the use of the chemical in household products which contribute to this accumulation.
7. Though it is unclear what levels of BPA might remain in cosmetics, exposure through cosmetic application would create a risk. BPA should be added to the cosmetics “Hot List” prohibiting its presence in cosmetic products.
8. BPA-containing dental sealants may vary in the exposure they create. The government should explore whether BPA sealants are needed, ensure that only safer ones are used, and promote the development of BPA-free alternatives.
9. The federal government should recommend against the use of BPA-containing municipal sludge for agricultural purposes. Given the high levels that may be found in sludge, this activity spreads BPA more widely and can impact ecosystems and create another source of human exposure through food.
10. More analysis is needed on the use of polycarbonate water pipes and how they might increase human and environmental exposure through BPA dissolving in water. If there is significant risk of exposure to BPA through water pipes their use should be addressed in the government’s risk management plan.