In Support of HB 6516,
AN ACT CONCERNING THE USE OF FLAME RETARDANT CHEMICALS IN CHILDREN'S PRODUCTS AND UPHOLSTERED RESIDENTIAL FURNITURE.

Senator Abrams, Representative Steinberg, Ranking Member Somers, Ranking Member Petit and Honorable members of the Public Health Committee,

Thank you for the opportunity to submit testimony in strong support of HB 6516.

My name is Susan Eastwood and I am a resident of Ashford and a parent of two grown children. I am a volunteer with the Coalition for a Safe and Healthy Connecticut, a group of over 50 non-profits working to phase out toxic chemicals from everyday products.

Clean Water Action and the Coalition for a Safe and Healthy Connecticut strongly support HB 6516, An Act Concerning the Use of Flame Retardant Chemicals in Children’s Products and Upholstered Residential Furniture. I commend the leadership of this Committee in their efforts to protect our most vulnerable from chemicals of high concern in items they are in contact with for many hours each day.

This bill would ban the manufacture or sale within Connecticut of any product marketed for the use of children twelve years of age or younger and upholstered residential furniture containing one hundred parts per million or greater of any organohalogen flame retardant chemical, including, but not limited to, chemicals containing the element bromine and chlorine bonded to a carbon that is added to a plastic, foam or textile.

There are a number of chemicals of concern used as flame retardants in children’s products, including the flame retardant chemicals decabromodiphenyl ether, hexabromocyclododecane, TDCPP, TDCP, TCEP and/or TCPP. Scientific studies linking one or more of these chemicals to serious disease are mounting up and pointing to serious health impacts from exposure at an early age including hormone disruption, toxicity to the developing nervous system, reproductive toxicity, and cancer.

- Chlorinated tris (TDCPP- tris(1,3-dichloro-2-propyl)phosphate) has been shown to change genetic material in fish\(^1\). It is listed by the State of California as a known cancer-causing chemical\(^2\), and associated with increased incidence of tumors in laboratory studies\(^3\).
- TDCPP was voluntarily removed from children’s pajamas in the 1970’s when it was found to be a probable human carcinogen. It has now shown up in many other products including nursing

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\(^3\) Matthews, HB et al. 1993. Toxicity and carcinogenicity of chronic exposure to tris(2-chloroethyl)phosphate. Fundamental and Applied Toxicology 20:477-485
pillows, changing mattresses, and bassinettes. A 2011 Duke University peer-reviewed study detected TDCPP in 36% of 101 items tested, making it the most common flame retardant detected in baby products.

- Both TDCP (tris(1,3-dichloro-2-propyl)phosphate) and TCEP (tris(2-chloroethyl) phosphate) have been shown to cause tumors in laboratory animal studies. TCEP is linked to nervous system impairment including seizures, brain lesions, memory loss and learning problems.

- TCPP (tris(1-chloro-2-propyl)phosphate) is chemically similar to other tris chemicals; it is a possible carcinogen, disrupts red blood cells, and irritates the skin. TCPP is found in a range of baby products including changing pads, sleep positioners, nursing pillows, car seats, and portable mattresses.

- HBCD (hexabromocyclododecane) is commonly used as a flame retardant in furniture upholstery and in polystyrene insulation foam. It is bioaccumulative, persistent, and toxic and shows up in household dust, indoor air, and food. It is also found in human blood serum, cord blood, and breast milk.

- HBCD has been shown to cause reproductive harm in Arctic birds at environmental levels, including egg shell thinning. Studies of mammals have shown reproductive, developmental, and behavioral effects with some of the effects being trans-generational.

- Deca-BDE (decabromodiphenyl ether) is a persistent and toxic chemical and is one of the most prevalent of the brominated flame retardants in the global environment; detected in fish and wildlife.

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as far afield as the Arctic\textsuperscript{13}. Closer to home, it is found in children’s toys, indoor air, and household dust\textsuperscript{14} as well as human blood serum, cord blood, placenta, and breast milk\textsuperscript{15}.

- Health effects include endocrine disruption, particularly thyroid function; and adverse neurodevelopmental effects, including mental development and cognition\textsuperscript{16}.

The Coalition for a Safe and Healthy CT participated in a national study which tested common items from the nursery for chlorinated tris. Of 20 items tested, 18 contained at least one form of tris, including the two items purchased in Connecticut\textsuperscript{17}.

Another study showed the presence of these toxic flame retardants in nap mats! Of the 24 nap mats tested, 22 contained flame retardants and nine of those contained chlorinated Tris. The nap mat submitted from Connecticut tested the highest for levels of TCPP!\textsuperscript{18}

High levels of flame retardants are added to polyurethane foam found in children’s products and home furnishings. In the Hidden Hazards study the concentration of flame retardant was on average 3.9\% of the entire weight of the foam! These chemicals off-gas and get into the air and house dust. Dust is known to be a major source of exposure to many flame retardants and young children have been found to have the highest levels. More than 96\% of dust samples collected in the Boston area contained TDCP. TCEP has also been widely detected in our surface water, indoor air, and dust. And, in our children! Biomonitoring studies on children have shown extremely high levels of flame retardants\textsuperscript{19}.

Certainly, the goal of fire prevention is commendable, but it can be accomplished more effectively in other ways. Proven ways of reducing fire-related deaths include fire-safe cigarettes, sprinklers, smoke detectors and enforcement of building codes. Other flame retarding materials may be used in place of foam; wool is a natural flame retardant and is already used in baby products marketed as safer. There are other chemical flame retardants that are safer alternatives as well.

\textsuperscript{17} Erika Schreder, “Hidden Hazards in the Nursery”, Washington Toxics Coalition/Safer States, January 2012. \url{http://watoxics.org/files/hidden-hazards-in-the-nursery}
\textsuperscript{19} Tests reveal high chemical levels in kids' bodies - CNN - Planet in Peril \url{http://www.youtube.com/watch?v=pBXvJWWlgss}
In fact, flammability tests have shown there is virtually no significant fire safety benefit to the use of these chemicals.\textsuperscript{20} Since it is the foam and not the outer coating of fabric that is treated with these chemicals, the fabric in these products will ignite anyway. Once the fabric ignites, the large flames are not retarded by the presence of these toxic chemicals. Further, the chemicals released from the foam increase the toxicity of the smoke, putting residents and firefighters at increased risk.

In conclusion, we feel that this bill is an important step to protect our children, families and first responders from toxic flame retardants in children’s products and upholstered furniture.

We urge your support of \textbf{HB 6516}. The country is moving in this direction. Rhode Island recently passed a similar bill and Massachusetts almost passed one.

Thank you.

Sincerely,

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Susan C. Eastwood
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\textsuperscript{20} Shaw, S; Blum, A; Weber, R; Kurunthachalam, K; Rich, D; Lucas, D; Koshland, C; Dobraca, D; Hanson, S; Birnbaum; “Halogenated Flame Retardants: Do the Fire Safety Benefits Justify the Risks?” Reviews on Environmental Health Vol. 25, No. 4; (2010).