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Testimony to the CGA Children's Committee
Testimony by Louis W. Burch
Citizens Campaign for the Environment

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Senator Bartolomeo, Representative Urban, distinguished members of the CGA Children's Committee, thank you for the opportunity to submit testimony on this important issue.

My name is Louis Burch and I represent Citizens Campaign for the Environment (CCE). Supported by over 80,000 members in Connecticut and New York State, CCE works to empower communities and advocate solutions that protect public health and the natural environment. We would like to offer the following testimony:

HB 5299- AAC Toxic Flame Retardants in Children's Products and Household Upholstered Furniture

Additive chemical flame retardants are toxic, contribute to a wide range of adverse health impacts, and are largely ineffective in improving fire safety. When used in non-polymeric additive foam, chemical flame retardants migrate out of household consumer products and into the home environment, leading to widespread human exposures. As they migrate out of furniture, they bond with household dust; making human exposure a very high probability. As a result, 97% of people living in the U.S. have measurable quantities of chemical flame retardants in their blood, as estimated by the national biomonitoring program conducted by the Center for Disease Control and Prevention (CDC)[1].

Children's Health and Environmental Concerns

Organohalogen flame retardants are toxic due to their physical, chemical and biological properties. These chemicals have been associated with many adverse human health impacts including reproductive impairment (e.g., abnormal gonadal development, reduced ovarian follicles and reduced sperm counts as well as increased time to pregnancy), neurological impacts (e.g., decreased IQ in children, impaired memory, learning deficits, altered motor behavior, hyperactivity), endocrine disruption and interference with thyroid hormone action (potentially contributing to diabetes and obesity), genotoxicity, cancer, and immune disorders.

[1] Sjödin A, Wong LY, Jones RS, Park A, Zhang Y, Hodge C, et al. Serum concentrations of polybrominated diphenyl ethers (PBDEs) and polybrominated biphenyl (PBB) in the United States population: 2003-2004. Environ Sci Technol 2008*b*;42(4):1377-84.

Toxicological studies reveal that flame retardants pose a disproportionate risk to the development of fetuses, infants, and young children, due to their smaller, rapidly growing bodies and developing immune systems. These chemicals can penetrate a pregnant mother's placenta and can be found in fetal tissues as well as mother's milk. Scientists believe chemical flame retardants have the potential to change the biochemistry and normal function of the nervous and endocrine systems that are vital for memory, cognition and learning. Because of their small stature and high rates of exposure, flame retardant levels in children's bodies are often many times the average concentrations found in adults[2].

Chemical flame retardants are also highly persistent chemical contaminants that have been found as far afield as the Arctic. They collect in the fatty tissues of fish, wildlife, and humans, and can accumulate in both marine and terrestrial food chains. Flame retardants were the most common emerging contaminant in a 2002 U.S. Geological Survey (USGS) study, which analyzed 139 streams and rivers across the country. According to USGS, these chemicals are present in virtually every treated wastewater discharge in the nation[3].

Fire Safety

Fire safety is important, although there is growing evidence that calls into question the efficacy of chemical flame retardants in protecting the public from fires. In fact, household fires have become more toxic over the years as plastic appliances and furniture containing flame retardants have become more common. When products containing chemical flame retardants burn, they produce large quantities of toxic smoke, soot, and chlorine gas, which quickly turns into hydrochloric acid in the lungs. This puts firefighters and other first responders at an elevated risk of developing certain cancers from exposure to toxic fumes.

A National Institute for Occupational Safety and Health (NIOSH) study of cancer incidence among 30,000 career firefighters found higher rates of several types of cancer, including mesothelioma, esophageal cancer, mouth and pharyngeal cancer, and cancers of the kidney, breast, intestine, stomach and lung.[4] Additionally, the University of Cincinnati conducted a meta-analysis of 32 peer reviewed published studies that included data from more than 100,000 firefighters. The study found that firefighters were 53% more likely to develop multiple myeloma, 51% more likely to develop non-Hodgkin's lymphoma, and 28% more likely to develop prostate cancer than the general population.[5]

The reality is that conventional wisdom regarding fire safety has improved, along with fire prevention infrastructure. The increased use of smoke and carbon monoxide detectors, improved building codes, improved firefighter training, and reductions in cigarette consumption have all led to a reduction of fire-related deaths[6], calling into question the need for chemical flame retardants in everyday household products. Conversely, insufficient evidence exists that proves the use of flame retardants actually prevents fire related deaths. Available data suggests that states without regulations requiring furniture foam to be treated with flame retardants are no more likely to have a higher incidence of fire deaths than the State of California, where flammability standards (TB 117) led to the use of chemical flame retardants in household furniture foam from since 1975 (Shaw, 2010). In 2013, due to health concerns and a lack of evidence that chemical

[2] CDC.ATSDR. Phosphate Ester Flame Retardants (2012) http://www.atsdr.cdc.gov/toxprofiles/tp202.pdf

[3] http://toxics.usgs.gov/pubs/FS-027-02/

[4] Daniels R, Kubale T, Yiin J, Dahm, M, et al. Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia (1950-2009). Occup Environ Med 2014;71:388-397.

[5] LeMasters G, Genaidy A, Succop P, Deddens P, et al. Cancer risk among firefighters: a review and meta-analysis of 32 studies. Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine 2006;48(11):1189-1202.

[6] U.S. Fire Administration/National Fire Data Center. A Profile of Fire in the United States, 1995-2004. Fourteenth Edition, February 2008

flame retardants improve fire safety, the State of California repealed TB 117, eliminating the flammability standard that led to the widespread application of chemical flame retardants on household furniture and appliances.

Unfortunately, flame retardants are poorly regulated in the U.S., and there are no formal mechanisms available to evaluate potential health impacts of these chemicals or remove those chemicals from the market. Chemical companies in the U.S. have no legal obligation to disclose information about potential environmental or public health hazards associated with the chemicals they produce.

The Toxic Substances Control Act (TSCA) offers little protection from the hazards of exposure to toxic flame retardants. Under TSCA, the EPA is required to have "convincing evidence" of a significant health hazard *before* requiring a detailed toxicology report from any given manufacturer. Connecticut can be a leader in protecting public health and safety by raising the bar nationally and removing harmful flame retardants from consumer goods.

Given their toxicity, bioaccumulative properties, potential for long range transport, and disproportionate health impacts on children and firefighters, it is critical that states move towards prohibiting toxic flame retardants in children's products and household consumer goods as soon as possible. **CCE strongly supports HB 5299; we applaud the Children's Committee for raising this important issue and respectfully urge committee members to support its passage.**

HB 5300- AAC the Use of Genetically Modified Organisms in Children's Food

Genetically modified (also known as *Genetically Engineered* or *GMO*) crops have been used widely in food production in the U.S. since the mid 1990's. It is currently estimated that 70-80% of the processed foods available in grocery stores today contain materials derived from genetically engineered crops, including baby food and foods made for kids.

In agricultural settings, genetic engineering has been overwhelmingly used to create crops that are herbicide-tolerant, insect-resistant, or both. Herbicide-tolerant crops have resulted in more herbicides being used to control the resulting evolved "super weeds," which can impact nearby surface waters, harm pollinators and other non-target insets, and pose serious health risks to consumers and farm workers. Organic and conventional crops have also become cross-contaminated with GMO crops, leading to a loss of biodiversity.

The long-term health effects of genetically engineered foods are still not fully understood, although there is a growing concern among the scientific community that these foods may be toxic, allergenic, or less nutritious than natural crops. Currently, no regulations exist at the state or federal levels that allow consumers to know whether the foods they purchase were produced with genetically modified organisms. Labeling children's foods that contain genetically modified ingredients gives consumers the right-to-know what's in the products they purchase for their families, so they can make their own informed decisions about the food they put in their children's bodies. CCE strongly supports giving consumers the right-to-know about genetically modified organisms in their children's food and respectfully urges this committee to pass this legislation as soon as possible.

On behalf of Connecticut's future generations, we thank you for the opportunity to submit testimony and look forward to working with you on this critical public health and safety issue.