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ACC-NAFRA Testimony on H.B 5404
Before the Connecticut Committee on Public Safety and Security
March 1, 2016

Co-chair Senator Tim Larson, Co-chair Representative Steve Dargan, and members of the Committee on Public Safety. My name is Jay West, and I am here today representing the American Chemistry Council and its North American Flame Retardant Alliance.[i]

We appreciate the opportunity to testify today and look forward to additional opportunities to provide information to the Legislature on the issues of fire safety and flame retardants.

I am speaking today in opposition to HB 5404, An Act Concerning Toxic Flame Retardants in Children's Products and Furniture. My testimony emphasizes four key points:

1. **Fire safety is a real issue and flame retardants are an important tool to help reduce fires, fire deaths and property damage.**
   - Fires have dropped significantly over the past 40 years, and a major contributor to the decline in fires and fire deaths since the 1970s was the development of a comprehensive set of fire-safety measures that include flame retardants.
   - At the same time, fire still represents a very real danger in the United States, with fire departments responding to a fire every 25 seconds. This is equally true for Connecticut where according to the latest annual data (2011) from the state, fire agencies in Connecticut reported more than 12,000 fire incidents which resulted in 18 fire fatalities, over 120 civilian fire injuries, and caused an estimated $48 million in property and content loss.[ii] For 2015, the U.S. Fire Administration reports that there were 18 media reports of civilian home fire fatalities in Connecticut.[iii]
   - One area of particular relevance to this Committee is the fire safety risk to children.
     - According to the U.S. Fire Administration's most recent annual data on fire risk to children, 355 children younger than 15 died as a result of fires and 57 percent of all child fire deaths affected children age 4 or younger. Also, fire injuries affected an estimated 2,000 children in 2010, and 49 percent of child fire injuries occurred to children age 4 or younger.[iv]
     - The U.S. Fire Administration's most recent Fire Risk to Children Report emphasizes that "very young children are typically dependent to some degree on others for their safety". "Escaping from a fire can be difficult for children. A child age 4 or under is usually too young to independently escape from a fire. Children of this age generally lack the mental faculties to understand the need and the means of quickly escaping from a burning structure."
   - The number of flammable consumer products in our homes and workplaces has increased, making consumer product fire safety a critical issue. For example, upholstered furniture (along with mattresses and bedding) is among the first products to ignite in a home fire.
     - The percentage of upholstered furniture open flame fires in the US has increased slightly over the last 30 years (from 19% in 1980 to 20% in 2009), and fires starting with upholstered furniture caused approximately 17% of US home fire deaths between 2009 and 2013.[v]

- In addition, 18.9% of fire fatalities and 6.97% of fire injuries were from home fires where upholstered furniture was the first item ignited.[vi,vii]
- A report by the National Fire Protection Association (NFPA) found that fires that begin on upholstered furniture do not stay on that piece of furniture. Only 6% of fires that started on upholstered furniture stay on the furniture while 68% of them spread beyond the room of origin.[viii]
- Upholstered furniture also can contribute to fires and fire losses, even when it is not the first item ignited. A recent analysis of NFPA's statistics found "that one-quarter of upholstered furniture fires, civilian injuries, and direct damages, and one-fifth (21%) of associated civilian deaths are associated with fires in which upholstered furniture is the primary item contributing to fire or flame spread but not the item first ignited."[ix]

- Because of the danger of fire, NAFRA supports robust fire protection measures and multiple layers of protections to address the risk of fire, including flame retardants. Flame retardants have been proven effective in preventing fires or if a fire does occur, slowing the fire's progression, giving individuals and families extra time to escape from potentially dangerous fire situations.

2. **Flame retardants include a broad range of products with differing characteristics, structures and intended uses, so it is not appropriate to make broad conclusions or impose a one-size fits all regulatory approach for these substances.**

- Flame retardants are added to or used to treat potentially flammable materials. The term "flame retardant" refers to a function, not a family of chemicals.
- A variety of different chemicals, with different properties and structures, act as flame retardants. A variety of flame retardants is necessary because the materials that need to be made fire-resistant are very different in their physical nature and chemical composition, as are the end-use performance requirements of the final product.
- It is important to note that flame retardants are not readily interchangeable. Their areas of application are often specific and substitution may be challenging, if possible at all.
- Language in this bill would impose broad restrictions on alternative flame retardants, including products that have not even been developed yet without any consideration of their safety benefits or evaluating any real-world potential for human health or environmental risk. We strongly believe this would be unnecessary and would potentially disincentivize the development of new, innovative products that could provide important fire safety benefits.

3. **Flame retardants are reviewed for their safety.**

- In the U.S., more than a dozen federal laws govern the safe manufacture and use of chemicals. Flame retardants on the market today, like all chemicals, are subject to review by the U.S. Environmental Protection Agency (EPA) and other national regulatory agencies around the world.
- Furthermore, flame retardant manufacturers continue to innovate to develop new products that reduce the incidents of deadly fires while enhancing their environmental, health and safety profile. New developed substances are subject to rigorous evaluation before they can be manufactured commercially. In the U.S., this includes requirements for companies to submit "pre-manufacture notices" to the EPA with information on

physical/chemical characteristics, any available health or environmental effects data, and anticipated use and exposure information, including any information on potential byproducts and disposal. As part of this process, the EPA can prohibit the manufacture of the new substance entirely, impose restrictions on its use, or require additional testing at any time.

- This bill would restrict a broad range of substances, including substances that government authorities have determined do not present a significant risk to human health or the environment. For example,
  - The European Chemicals Bureau's (ECB) 2008 assessment of TCPP examined multiple endpoints—acute toxicity, irritation, corrosivity, sensitization, repeated dose toxicity, mutagenicity, carcinogenicity, and reproductive toxicity—from inhalation, ingestion, dermal exposure routes. For TCPP, ECB found:
    - Regarding risk to the environment, "There is at present no need for further information and/or testing and no need for risk reduction measures beyond those which are being applied already."[x] The study also noted that TCPP meets neither the bioaccumulation nor toxicity criteria for persistent, bioaccumaltive, and toxic (PBT) designation.
    - ECB made the same conclusion with respect to potential risk to workers, consumers, humans exposed via the environment. The conclusion held even when ECB combined consumer and environmental exposures.[xi]
  - Similarly, in its 2008 assessment of TCDP, the ECB concluded that with respect to human health and consumer exposure, "There is at present no need for further information and/or testing and no need for risk reduction measures beyond those which are being applied already." The conclusion "applies to all consumer exposure scenarios for the endpoints acute toxicity, irritation, sensitisation, repeated dose toxicity, mutagenicity, carcinogenicity, effects on male fertility, and developmental toxicity."[xii]
  - HBCD was evaluated by Health Canada and Environment Canada in 2011. Regarding potential human health risks, the Canadian authorities concluded "HBCD is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health."[xiii]

4. **The U.S. Environmental Protection Agency (EPA) is currently conducting an updated review of key flame retardants.**

- Under its TSCA Work Plan Chemicals Program, EPA is conducting updated assessments of over 70 flame retardants. As part of this process, industry has provided data and testing information to help inform the Agency's reviews.
- USEPA is currently conducting an updated review of a number of flame retardants under its "Work Plan Chemicals Program" including the majority of the chemicals listed in this bill. These are comprehensive assessments that include evaluation of specific uses and exposed populations (e.g., workers, children, general public). If EPA identifies a risk, it will pursue regulatory action such as restriction or bans on certain uses of a chemical. We understand it costs EPA approximately $2.5 million on average to complete the assessment and any follow up regulatory action on Work Plan chemicals.
- Given that these assessments, which are intended to assess specific uses and exposure information, are already underway, we think it would be important for Connecticut to

consider this information as it assesses flame retardants and before it takes any action on these substances.

Conclusion

- In conclusion, ACC and the North American Flame Retardant Alliance support a strong and transparent regulatory system that provides both strong fire protection and chemical safety.
- We urge you to consider the critical role flame retardants play as one tool in the fire safety toolbox.
- We also urge you to consider the risk assessments done already by other governments that found no concern for human health and the environment, as well as the significant investment the U.S. EPA is making in the health and environmental risk assessments of many of the substances that would be restricted under H.R. 5404.
- We urge you to consider this information and oppose any restrictions on flame retardants that are not grounded in science.

Thank you for the opportunity to testify before you today.

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[i] NAFRA members include Albemarle Corporation, Chemtura Corporation/Great Lakes Solutions, and ICL Industrial Products who manufacture brominated and other flame retardants used in a wide variety of industrial and consumer applications.

[ii] Connecticut Department of Public Safety. State Totals of Fire Incidents, Casualties, and Dollar Loss for 01-2012 to 12-2012 (http://www.dir.ct.gov/dps/cfirs/pdfs/State%20Totals%20of%20Fire%20Incidents,%20Casualties,%20and%20Dollar%20Loss%20for%2001-2012%20to%2012-2012.pdf).

[iii] U.S. Fire Administration. Home Fire Fatalities in the News (searchable database). Available at https://apps.usfa.fema.gov/civilian-fatalities/incident/reportList.

[iv] U.S. Fire Administration Annual Fire Statistics 2011 and Fire Risk to Children Report 2010 (http://nfa.usfa.dhs.gov/downloads/pdf/statistics/v14i8.pdf).

[v] Ahrens, M. 2015. Home Structure Fires. NFPA Fire Analysis and Research. Available at http://www.nfpa.org/research/reports-and-statistics/fires-by-property-type/residential/home-structure-fires.

[vi] Home Structure Fires that Began with Upholstered Furniture. 2011. NFPA Fire Analysis and Research. Available at http://www.nfpa.org/~/media/Files/Research/Fact%20sheets/UpholsteredFactSheet.pdf (accessed Oct. 13, 2015).

[vii] *Home Structure Fires*, Marty Ahrens, NFPA Fire Analysis and Research, June 2011, available at http://www.nfpa.org/press-room/news-releases/2011/nfpa-releases-report-on-home-fires/?p=1.

[viii] Ahrens, M. Home Structure Fires. 2011. NFPA Fire Analysis and Research. Available at http://www.nfpa.org/press-room/news-releases/2011/nfpa-releases-report-on-home-fires/?p=1.

[ix] Hall, J.R., Jr. 2014. Estimating Fires when a Product is the Primary Fuel but not the First Fuel, with an Application to Upholstered Furniture. National Fire Protection Association. Page 1. Available at http://www.nfpa.org/~/media/Files/Research/NFPA%20reports/Major%20Causes/osprimaryfuel.pdf.

[x] European Chemicals Bureau. 2008. European Union Risk Assessment Report Tris(2-chloro-1-methyl ethyl) phosphate (TCPP). Page 8. Available at: http://echa.europa.eu/documents/10162/6434698/orats_summary_tris2-chloro-1-methylethylphos_en.pdf.

[xi] *Id.* at 14.

[xii] European Chemicals Bureau. 2008. European Union Risk Assessment Report Tris[2-chloro-1-(chloromethyl)ethyl] phosphate (TDCP). Page IX. Available at: http://echa.europa.eu/documents/10162/6434698/orats_final_rar_tris2-chloro-1-chloromethyleth_en.pdf.

[xiii] Environment Canada and Health Canada. 2011. Screening Assessment Report on Hexabromocyclododecane. Available at: http://www.ec.gc.ca/ese-ees/7882C148-8AE4-4BA4-8555-668C49F91500/HBCD%20-%20FSAR%20-%20EN.pdf Page. 50.