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**To:** Senate Committee on Health and Welfare

**From:** Lauren Hierl, Environmental Health Advocate, VPIRG

**Date:** February 26, 2013

**Subject:** Support for S.81, protecting Vermonters from toxic, ineffective flame retardant chemicals

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**Thank you for the opportunity to testify in support of S.81.** My name is Lauren Hierl, and I'm the Environmental Health Advocate at the Vermont Public Interest Research Group (VPIRG). VPIRG is the state's largest nonprofit consumer and environmental advocacy organization with more than 20,000 members across Vermont. VPIRG has been a leading voice on environmental health issues, and we also coordinate the Alliance for a Clean and Healthy Vermont – a coalition of public health advocates, environmental groups, children's advocates, medical professionals, and citizens working to reduce Vermonters' exposure to toxic chemicals.

As you know, in 2009 Vermont passed legislation to phase out the use of PBDEs, including Deca, from furniture and electronics because these chemicals are linked to negative health impacts and have no demonstrable fire safety benefits. **S. 81 builds on this important legislation by expanding the ban on Deca to plastic shipping pallets, and extends the ban to another class of unsafe and ineffective flame retardant chemicals, chlorinated Tris, from children's products and furniture.**

**Chlorinated Tris first came into the national spotlight in the 1970s when studies linked it to cancer, and it was pulled from children's pajamas at that time.** In the intervening years, the chemical industry quietly found a new market for this chemical in other baby products, including nursing pillows, changing pads, high chairs, and more. Further, as chemicals like Deca have been phased out of use, Tris has become one of the most commonly used chemical replacements in home furnishings, like our couches. Recent studies found Tris in 36% of baby products tested, and more than half of couches purchased since 2005.<sup>i</sup>

Further, this chemical escapes from our furniture and children's products into dust and into our bodies.<sup>ii</sup> Once in our bodies, **Tris has been linked to negative health impacts ranging from cancer to reproductive harm such as reduced fertility, and neurological impacts such as lowered IQ.** Toddlers have especially high levels of these chemicals in their bodies. The Environmental Protection Agency, Consumer Product Safety Commission (CPSC), World Health Organization, and other entities have identified chlorinated Tris as a likely carcinogen, and the CPSC has stated that levels we're exposed to through our furniture are above safe thresholds.<sup>iii</sup> California has listed TDCPP under Proposition 65 as a "chemical known to the State of California to cause cancer, birth defects, or other reproductive harm."<sup>iv</sup> Further, when these chemicals are ignited, they release dangerous gases that make fires more dangerous for firefighters.

Vermont is not alone in seeking to ban chlorinated Tris from consumer products. **At least seven other states have introduced or plan to introduce legislation to ban Tris this year.** New York State already enacted legislation in 2011 to phase out one form of Tris included in S.81, TCEP, from children's products, and the Maryland House just voted 135-0 this week to ban TCEP from children's products. TCEP is also recognized by Maine and Washington as a "chemical of concern" to children's health.

Although there is less toxicology information available for TCPP, the third form of Tris included in S.81, its close structural similarity to TCEP and TDCPP provides reason for it to be considered a chemical of

concern, as described in a 2012 report from the European Union.<sup>v</sup> Further, scientists have demonstrated this chemical is persistent in the environment (e.g., it's been found in waterways and animals), and it bioaccumulates in our bodies (e.g., it's been detected in breastmilk and urine).<sup>vi</sup> TCPP is not currently used extensively in the products targeted in this legislation, and since it provides no fire safety benefit, keeping it out of our furniture and children's products is a precautionary, commonsense measure.

Regarding S.81's ban on Deca in plastic shipping pallets, in 2009 the legislature determined this chemical was harmful to our health and ineffective for fire safety, and phased out its use in furniture and electronics. In the meantime, we've learned the chemical industry found a lucrative new market for their chemical – plastic shipping pallets. So after the legislature worked to get this chemical out of our homes, we've come to learn that our food and other products are now being shipped in pallets that contain Deca. One issue of particular concern to us is that when these pallets are carrying fruits and vegetables, they get sprayed down, and since Deca has been shown to leach from plastics, this chemical could be getting directly into the food we're consuming, including organic produce. **Maine, Maryland, and Oregon have already banned Deca in plastic shipping pallets in their states, and Vermont should do the same.**<sup>vii</sup>

A primary driving force in keeping these flame retardant chemicals in our products is an obscure California regulation, which has become a *de facto* federal regulation, Technical Bulletin 117 (TB117). This regulation requires foam like that used in our couch cushions to resist an open flame, such as a candle, for 12 seconds. The most cost-effective way to meet this standard is to saturate the foam with chemicals. As it turns out, this flammability test doesn't accurately reflect how most fires spread in our homes. In the first peer-reviewed paper that evaluated the fire safety benefits of TB 117, fire scientist Vytenis Babrauskas, PhD, concluded: **"the evaluation of the fire safety benefits of TB 117 foams is simple – there are no benefits."** Fortunately, safer alternatives exist. Fabric construction and barriers between fabric and foam have been shown to be much more effective at slowing the spread of fires, and don't require the use of risky chemicals.

**A 2012 investigation by the Chicago Tribune revealed decades of lies and deception by the chemical industry to keep the lucrative market for flame retardant chemicals intact.** These tactics included blatantly distorting scientific findings regarding the fire safety benefits, partnering with Big Tobacco, creating fake citizen front groups like "Citizens for Fire Safety," and flying a doctor to state legislatures to testify with a horrible story about a baby who had a candle fall in her crib, was burned, suffered, and died – which the doctor attributed to a lack of flame retardant chemicals in her crib. But, it turns out this baby never existed. We saw these kinds of underhanded tactics in Vermont while working to ban Deca.

The appalling behavior of the chemical industry got the attention of federal legislators and regulators across the country. Among other steps, Governor Jerry Brown called on California to revise TB 117. The draft revised standard uses a "smolder standard" instead of the open flame standard. The American Home Furnishings Alliance, a furniture industry trade group, testified this past summer in the U.S. Senate that **approximately 90% of furniture on the market today can meet this new smolder standard without requiring the use of chemical flame retardants.** Further, in a recent conversation with AHFA, due to Tris' listing under Prop 65, there is already movement away from Tris in the furniture industry. These companies don't want to have to list their furniture as containing a known carcinogen.

Such voluntary moves away from toxic flame retardants are a great step, but as we saw with the voluntary removal of Tris from pajamas in the 1970s, we need legislation to make sure these toxic chemicals are truly taken off the market. Based on the information described above, and our experience

with phasing out toxic chemicals from consumer products in Vermont in recent years – from Deca in furniture and electronics to phthalates in children’s products – **we believe the timeline in this bill gives manufacturers and retailers ample opportunity to phase out the use of these toxic and unnecessary chemicals in their products.**

**We have one recommended provision to strengthen S. 81:**

- In Sec. 2974, there’s a requirement to stop manufacturing Tris-containing products by July 1, 2013. Retailers have another full year to come into compliance with this ban, and as of July 1, 2014 can’t “knowingly sell” furniture or children’s products containing Tris. What’s missing is a **requirement that manufacturers disclose to retailers if their products contain Tris**. Without this disclosure requirement, it will be very difficult for the Attorney General to enforce this measure, since no retailer would presumably ever know if the products in their stores contain Tris.
- **Sample language:** No later than October 1, 2013, any business other than a retailer that since January 1, 2011, has manufactured or distributed for sale, or sold or offered to sell, in or into this state any children’s product or residential upholstered furniture containing, in any product component, Tris in an amount greater than fifty parts per million, shall notify each purchaser of such item, by mail or by email, of the fact that the item contains Tris and the concentration of Tris in parts per million of each product component.

To conclude, despite the chemical industry’s claims that we’re too small a state to take the lead on these issues, Vermont has remained at the forefront of protecting our citizens from toxic chemicals. Ultimately, with over 80,000 registered chemicals, we can’t keep addressing these chemicals one by one. We need to implement a stronger program to more proactively and systematically regulate toxic chemicals in Vermont, and I look forward to working with you on this important issue. In the meantime, **we urge you to support S.81 to protect Vermonters from unnecessary and toxic flame retardant chemicals.**

Thank you for your time, and I’d be happy to answer any questions.

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<sup>i</sup> Stapleton, HM, et al, 2011. Identification of Flame Retardants in Polyurethane Foam Collected from Baby Products. Environmental Science & Technology; Stapleton, HM, et al, 2012. Novel and High-Volume Use Flame Retardants in US Couches Reflective of the 2005 PentaBDE Phase-Out. Environmental Science & Technology.

<sup>ii</sup> Dodson, RE, et al, 2012. After the PBDE Phase-Out: A Broad Suite of Flame Retardants in Repeat House Dust Samples from California. Environmental Science & Technology.

<sup>iii</sup> See, for example: Babich, M. A. 2006. CPSC Staff Preliminary Risk Assessment of Flame Retardant (FR) Chemicals in Upholstered Furniture Foam. U.S. Consumer Product Safety Commission.

<http://www.cpsc.gov/library/foia/foia07/brief/ufurn2.pdf>.

<sup>iv</sup> CA Office of Environmental Health Hazard Assessment, 2011. Proposition 65 listing, [http://oehha.ca.gov/prop65/prop65\\_list/102811list.html](http://oehha.ca.gov/prop65/prop65_list/102811list.html)

<sup>v</sup> Scientific Committee on Health and Environmental Risks , 2012,

[http://ec.europa.eu/health/scientific\\_committees/environmental\\_risks/docs/scher\\_o\\_158.pdf](http://ec.europa.eu/health/scientific_committees/environmental_risks/docs/scher_o_158.pdf)

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<sup>vi</sup> EUC. European Union Risk Assessment Report- TCPP. 2008; van der Veen I, de Boer J. Phosphorus flame retardants: Properties, production, environmental occurrence, toxicity and analysis. *Chemosphere*. 2012 Aug;88(10):1119–53. Möller A, Sturm R, Xie Z, Cai M, He J, Ebinghaus R. Organophosphorus flame retardants and plasticizers in airborne particles over the Northern Pacific and Indian Ocean toward the Polar Regions: evidence for global occurrence. *Environmental science & technology*. 2012 Mar 20;46(6):3127–34; Eggen T, Moeder M, Arukwe A. Municipal landfill leachates: a significant source for new and emerging pollutants. *The Science of the total environment*. 2010 Oct 1;408(21):5147–57; Fries E, Mihajlovi I. Pollution of soils with organophosphorus flame retardants and plasticizers. *Journal of environmental monitoring : JEM*. 2011 Oct;13(10):2692–4; Covaci A, Geens T, Roosens L, Ali N, Van den Eede N, Ionas AC, et al. *Emerging Organic Contaminants and Human Health*. Berlin, Heidelberg: Springer Berlin Heidelberg; 2012.

<sup>vii</sup> See, for example:<http://www.mainelegislature.org/legis/statutes/38/title38sec1609.html>;  
<http://www.palletenterprise.com/articledatabase/view.asp?articleID=3119>