

Proposed Chapter 173-337 WAC

Testimony from hearings on January 18 and 19, 2023

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1. AJ Johnson, Washington State Council of Fire Fighters (WSCFF)

Good morning, I'm AJ Johnson representing the 8,500 members of the Washington State Council of Fire Fighters, speaking in support of banning the use of these toxic chemicals that are sickening and killing firefighters. The Washington State Council of Fire Fighters have been working on reducing the use of toxic chemicals and products for more than a decade. This rule is critical to ending exposures to carcinogens and other toxics we face on the job in our everyday lives.

There are safer alternatives identified by the agency and we've known they exist for a long time, it's time to move forward. It's important to address the entire class of organohalogen flame retardants. We have supported this at the federal level and there's still a lack of action. The use of organohalogen flame retardants threatens the health of firefighters. Cancer is now the leading cause of death among firefighters, and we have much higher rates of cancer than the general population.

Substituting safer alternatives to organohalogen flame retardants is pure common sense and reduces unnecessary exposures to chemicals that can cause a range of health effects, including cancer. Washington State should be a leader in banning this class of organohalogen. Thank you.

2. Shirlee Tan, Public Health — Seattle & King County

Thank you. Thanks for the opportunity to comment today. My name is Shirlee Tan. I'm a senior toxicologist for the Public Health Department for Seattle in King County, and our department strongly supports the actions outlined in the proposed rule. These actions will protect the health of Washington residents, particularly children. I would like to highlight, flame retardants as one of the priority chemical classes in the rule as an example of the importance of this proposed rule.

Flame retardants have been linked to serious health impacts, especially in developing babies and children. These include decreased IQ, learning memory and attention deficits, cancer, reproductive problems, and hormone and immune disorders. In 2017, the U.S Consumer Product Safety Commission issued a warning to consumers, particularly to parents, to avoid products containing organohalogenated flame retardants.

They noted the health risks they pose outweigh their flame retardant activities, as scientists have determined that these chemicals do not effectively reduce larger spreading flames. These chemicals migrate out of products and stick to dust that we inhale and ingest. More than 97% of us have measurable quantities in our blood, and children have three to five times greater than adults due to their size, proximity to the floor and hand-to-mouth behavior.

All of the priority chemicals in the proposed rule end up in our municipal wastewater system and our landfills transferring the cost of disposal and cleanup to the taxpayer. This cost, in addition to the health burdens should not be shouldered on Washington residents, rather, manufacturers should be required to utilize safer chemicals and products in the first place. This rulemaking starts the process to reduce health impacts and costs to the public.

Public Health Seattle King County will provide a detailed comment letter, but we wanted to verbally express our support of the proposed rule, and we thank the Washington Department of Ecology and the Department of Health for this impactful work. Thank you.

3. Lydia Jahl, Green Science Policy Institute

Thank you. My name is Dr. Lydia Jahl. I am a PhD chemist at the Green Science Policy Institute. Our institute's research and policy work has reduced the use of harmful chemicals including flame retardants and PFAS from being added to consumer products worldwide. To reduce Americans' exposure to harmful chemicals, protect ecological health and encourage manufacturers worldwide, to remove harmful chemicals from

consumer products, we support the safer products for Washington proposed rules discussed today.

More specifically, we support the rules restricting organohalogen flame retardants, because exposure to them can result in hormonal and neurological problems as well as cancer. Furthermore, the smoke resulting from the burning of products containing organohalogen chemicals is extremely toxic, making fires more dangerous for fire victims, bystanders and firefighters working to extinguish the fires.

When used in electronics, organohalogen flame retardants can result in serious health effects in product users, product assembly workers and electronics recycling workers. The lifecycle of the chemical production, use and disposal is environmentally damaging. There are safer alternatives identified by the Department of Ecology and independent bodies such as TCO certified electronics that are available to meet flammability standards while reducing high implemented restrictions on organohalogen flame retardants and electronics, so precedents for this restriction already exists.

It is scientifically sound and appropriate to group all organohalogen flame retardants together as a class due to the presence of halogen atoms. Simply banning one chemical at a time only results in replacing chemicals similar in structure and therefore similar in harm. **[inaudible 00:08:05]**

[pause 00:08:07]

-- model is not achievable for products like kitchen utensils. Flame retardant exposure is also a concern in recreational polyurethane foam products. As there are no significant fire arresting facilities that use these foams, flame retardants are simply not necessary. Rather, the use of flame retardants and these foams only harms users who are often children most susceptible to the **[unintelligible 00:08:43]** alarms, sprinkler systems, and evacuation plans are all safer and more effective ways of preventing fire injuries in such facilities.

We also support the proposed restrictions on carpets and rugs, indoor furnishings and aftermarket stand water resistant treatments containing PFAS as this would also reduce direct consumer exposure to this harmful class of compounds. All such uses are unnecessary and safe alternatives already exist. Similarly, the classes of compounds of bisphenols and phthalates are also harmful and cannot do and we hope that manufacturers will implement these changes as quickly as possible.

In summary, the Green Science Policy Institute supports the proposed rule. Along with work in other states and on a national level, restricting the use of listed priority chemicals will greatly improve the health of our citizens and the environment. Thank you.

4. Mark Rossi, Clean Production Action (CPA)

Good morning, everyone. I'm Dr. Mark Rossi, the Executive Director of Clean Production Action. Clean Production Action is a nonprofit organization whose mission is to design and deliver strategic solutions, green chemicals, sustainable materials, and environmentally preferable products. We have over two decades of experience in identifying and promoting safer solutions to hazardous chemicals and working collaboratively with businesses, advocacy organizations, and governments to advance those solutions.

Clean Production Action strongly supports the new proposed rule for safer products, restrictions, and reporting in Washington State. I want to speak in particular in support of Section 112(c) to restrict intentionally added organohalogen flame retardants **[unintelligible 00:10:31]**. I want to make three high level points and then provide examples related to them.

The first is treating OFRs as a class as common practice. In the electronic sector today there are clearly safer alternatives to OFRs in these applications. The OFR-free products are meeting fire safety standards. A few examples of this common practice in the electronic sector is one is TCO certified, who it looks like Clare Hobby will be saying more about their work.

I just want to highlight that TCO certified has identified 22 safer **[unintelligible 00:11:23]** safer alternatives. Of those 22, 12 are Benchmark 2 GreenScreen chemicals and 10 are GreenScreen Benchmark 3 chemicals. GreenScreen language **[unintelligible 00:11:37]** GreenScreen Benchmark 1 is red and have 10 GreenScreen Benchmark 3 chemicals, so there's clearly safer chemicals that are on the market in the use. TCO Certified requires all flame retardants to be greater than GreenScreen Benchmark 2 or higher.

Additionally, another electronics certification, EPEAT has optional criteria that assess and address classes of chemicals of concern, including restricting or eliminating bromine and fluorine and brominated flame retardants and fluorinated flame retardants and chlorinated flame retardants. Many major electronics companies have products that meet that optional criteria.

I just want to highlight the three of the largest electronics firms in the world are manufacturing products without intentionally added brominated and chlorinated flame retardants in their products. Apple, Dell, and Samsung all restrict the brominated and chlorinated compounds as flame retardants in their products. I'll just highlight, specifically, Dell's restrictions.

Dell prohibits the use of PBBs, polybrominated biphenyl and poly diphenyl ethers in all applications. Prohibits the use of all other BFRs in plastic parts for desktops, laptop and server products, as well as TCO certified displays and Blue Angel Certified printers. Prohibits the use of all BFRs in plastic parts. Their products meet fire safety standards requiring the use of some flame retardant plastics.

It's clear you've got Apple, you've got Dell, you've got Samsung, have all restricted the chlorinated and brominated flame retardants in their products. Given these examples, Washington state's restriction of OFRs in electronics is in alignment with current practices in the market, and thus, Clean Production Action supports the restriction of OFRs in electronics and indoor uses, as well as the entire package of restrictions and reporting requirements in this proposed rule. Thank you very much for your time today.

5. Clare Hobby, TCO Certified

Thank you. My name's Clare Hobby. I'm the Director of Purchaser Engagement for TCO Certified. We are the sustainability certification for IT hardware, so office electronics like computers, displays, and the like. I'm happy to speak today in support of the proposed rule around halogenated flame retardants and talk a little bit about our work there as Mark has already mentioned.

Our criteria embedded in TCO Certified cover a wide range of social and environmental sustainability issues connected to the lifecycle of electronics. We currently have just around 4,000 certified product models in various categories from around 29 brands. This is a very dynamic list, which changes almost daily.

TCO certified is cited widely by private and public sector IT purchases around the world and is a really important signal on sustainability to the IT industry. We're seeing a growing awareness and concern around chemical use in the products that we certify. We have had criteria in place since the mid 90s addressing and limiting the use of halogenated flame retardants while maintaining product safety as part of TCO Certified.

In 2015, we introduced a new positive list approach called the Accepted Substance List to close data gaps and to identify and build a list of safer substitutions that we can list publicly and make available to the industry at large and even industries beyond the IT space. The rationale was to increase the available data and knowledge about what was being used and replace the substances that are restricted in these products.

To be included on the TCO Certified Accepted Substance List, a chemical substance must achieve an independent Benchmark 2 or better according to GreenScreen for safer chemicals. As it is right now, as Mark mentioned earlier, we have 22 widely used nonhalogenated flame retardants that have achieved a Benchmark 2. About 50% of those have in fact progressed to show a Benchmark 3 since they were first included on the list.

We're seeing continuous improvement in filling these data gaps, which means we've been able to raise the benchmark on several of the substances listed. Increasingly, chemical suppliers are sharing data with us in order to have their chemicals added to the Accepted Substance List. This is in a distinct response to purchaser and industry demand for safer substitutions. A second conclusion here-- The first conclusion is really that safer substitutions are already in use, they are available, the list is growing. We're able to share this list publicly, not just within the IT industry, but even to other industries as well, to make safer substitutions to the mainstream choice.

The second conclusion I want to contribute today is that the industry is already using these safer substitutions at scale in volume products. All the brands and manufacturers who apply for TCO Certified for their products are required to use the flame retardants from the ASL that have these sacred benchmarks. The industry is already in the routine of using these safer alternatives at scale. Typically, the larger brands that certify their products with us apply to certify their volume, commercial grade computers and displays and other categories that are sold globally. This is in direct response to purchaser demand for TCO Certified products among private and public sector organizations around the world. We're happy to speak in support of the proposed rulemaking today. Thank you for your time.

6. Gillian Miller, Ecology Center

Thank you. I am Gillian Miller, Senior Scientist and PhD Chemist at the Ecology Center, which is an environmental health nonprofit in Ann Arbor, Michigan. We have been testing consumer products and other items for hazardous chemicals for many years, and we support their proposed rules. My comments today are focused mostly on bisphenols and thermal paper because in 2022 it happens that we tested over 500 cash register receipts made from thermal paper collected across the country, including some from the Seattle area. We're currently preparing a report for a release.

A large majority of the receipts we tested were coated with bisphenol S, BPS, a small number were still using BPA, bisphenol A. Both of those chemicals are bisphenols, which this rule proposes to restrict. There's a wide body of research about these chemicals in receipt paper. We know that cashiers, people who handle receipts during their workday show a spike in these chemicals in their bodies after a work shift. The estimated daily intake for workers who handle receipts of BPA or BPS, depending on what they're handling, is many times higher than the general population.

Now, BPA is the best studied, it's a well known toxicant associated with negative fertility effects, low birth weights. BPS is an ill-chosen substitute also showing evidence of reproductive toxicity. For these reasons, BPA is banned from use in receipt paper in the European Union and BPS is currently targeted for restriction.

The good thing is better options are readily available. Companies can avoid automatically printing receipts. They can offer an electronic receipt option. For receipts that do get printed, several non-bisphenol drop-in replacements are available. Many business have already switched all their stores to non-bisphenol receipt paper. The higher cost of safer alternative receipt paper can be offset by not printing receipts by default, and by offering electronic option. It is clear that restricting bisphenols as proposed is both needed and feasible.

I have one more comment on a different section of the bill regarding the organohalogen and certain other flame retardants. Others have summarized and covered the concerning possible health impacts from these chemicals. I wanted to emphasize that this is based on Ecology Center options for products made. Recycling keeps the chemical circulating into new products that wouldn't normally contain any flame

retardants. Landfilling can eventually lead to leeching into fresh water and incinerating emits highly toxic byproducts such as halogenated dioxins into the air. Thank you for the opportunity to comment today.

7. Cheri Peele, Toxic-Free Future

Good morning and thank you for the opportunity to testify today. My name is Cheri Peele. I'm a senior program manager with Toxic-Free Future in Seattle, Washington. Ecology's breaking new ground with this program proposing significant bans on four classes of chemicals in 10 product categories. We fully support all of the proposed restrictions. It's an excellent step forward, and we really appreciate all of the work that Ecology staff has done, including the robust public stakeholder process.

Strong regulatory actions are needed to protect vulnerable populations and vulnerable species, from pregnant women to children and salmon and orcas. For example, everyone's talking about flame retardants, I'll give that as my example. Due to their widespread use, organohalogen flame retardants have been detected in indoor dust and air, human serum and breast milk, outdoor air, sediment surface water, fish, and wildlife.

People are most often exposed by accidentally ingesting or inhaling them through indoor dust or by eating food contaminated with flame retardants. An exposure to organohalogen flame retardants has been associated with harm to neurodevelopment, especially reduced IQ, reproductive abnormalities, reduced fertility, cancer, and alterations in thyroid function.

Strong enforceable chemical bans work and it's critical to prevent regrettable substitutions by using a class-based approach and tools to identify safer alternatives. For example, when PBDE chemicals were banned in Washington some years ago in 2016, scientists recorded decreased levels of PBDEs in wildlife, which is great, except that replacement organohalogen flame retardants have been used in electronics since then and also build up in wildlife. The class-based approach taken by the proposed regulation is both effective and efficient, which ensures that the most toxic chemicals will decrease over time and also help manufacturers avoid regrettable substitutes.

While toxic chemicals impact everyone, vulnerable populations, such as low-income communities and communities of color, are disproportionately impacted. This leads to intergenerational harm as their children carry the burden of negative health effects from toxics. Protecting the most vulnerable, including highly impacted communities, is core to the Safer Products for Washington Law, and the only solution is really prevention.

I have a few overall comments followed by some specific comments. The first is that, especially for the case of persistent chemicals, limits need to be set as close to zero as possible. We have here a cautionary tale of PCBs, which, like the chemicals addressed by this regulation, are persistent and toxic. Limits in PCBs for inks and dyes are at 50 parts per million, which is considerably less than the limits in this regulation, which go up to 1,000 or 1,500 parts per million.

There's a bill in front of the Washington legislature right now that would direct Ecology to request EPA to lower the limits in products because there are recycling facilities along the Spokane River that can't meet their water discharge standards for PCBs because of the high levels of PCBs in the inks and dyes in the paper. The only way for these other businesses that are recycling the paper to meet their limits would be to eliminate or lower the levels of PCBs in the products to begin with.

Now, some specific comments on the rule. Again, we strongly support all of the proposed bans. We are disappointed for PFAS that Ecology didn't propose a ban on outdoor furnishings. This will be banned in California and Colorado and our research into how PFAS functions in outdoor furnishings shows that it isn't long-lasting and actually needs to be constantly reapplied. Ecology itself is recommending a ban on PFAS in after-treatment products.

Specific comments on organohalogen flame retardants. Again, we strongly support the ban. We've heard that safer solutions are already available and in use. It's important to be comprehensive with indoor electronics. People are exposed to flame retardants from a wide number of sources, not just TVs, including kitchen appliances, phones, hair dryers, et cetera. The flame retardants can't be contained. They get out into the dust, into wildlife and into people.

Organohalogen flame retardants need to be banned in order to achieve a circular economy. Products with these flame retardants can't be recycled back into other products. A 2022 study showed that black plastic made from likely recycled electronics casings included ruminated flame retardants in children's toys, office supplies, hair accessories, or kitchen utensils. Again, as Gillian was saying, the only way to achieve a circular economy where we're reusing these products, we need to eliminate the hazards upfront.

Chanele: Cheri, let me interrupt you real quick. Are you about finished or do you want to come back for-- okay.

Cheri Peele: No, that was it. Congratulations again to Ecology staff and we strongly support all of the restrictions. Thank you for your comments. We'll be submitting a detailed comment letter. Thank you.

8. Laurie Valeriano, Toxic-Free Future (on behalf of Brandi Hyatt from Yakima County)

Thank you. My name is Laurie Valeriano. I'm the Executive director of Toxic-Free Future, and I am going to be reading a statement from Brandi Hyatt, who is a resident of Yakima whose well was one of 300 drinking water wells that was tested for contamination of PFAS for firefighting foam and as a result of the army now.

My name is Brandi Hyatt. My husband, two small children, and I have been unknowingly exposed to high levels of PFAS chemicals through our drinking water. I have a disease that exposure to forever chemicals is linked to. If I had been given a choice, if the

knowledge had been shared, if people that knew about PFAS chemicals before me had informed me, I would have never knowingly exposed the health and safety of myself and my family.

We, the people, have a right to say no to forever chemicals. Every exposure pathway should be eliminated, whether it be water, cookware, food packaging, textiles, firefighting foam, we can do better than the chemicals that our bodies and environment cannot digest. Please take action for people like me that have had to learn about PFAS chemicals the hard way by being hyper-exposed and suffered the health consequences.

This rule is also for people that have yet to understand what PFAS chemicals are and are exposed in so many ways within the safety of their own homes. Please protect our earth and our bodies. Moving forward with this rule will create positive change. Pursue PFAS free. Thank you, Brandi Hyatt.

9. Ben Gann, American Chemistry Council (ACC)

Thanks, everyone. Ben Gann, Director at the American Chemistry Council here today representing ACC's North American Flame Retardant Alliance or NAFRA. NAFRA will provide brief comments today and plan to submit more extensive comments by the February 5th deadline.

Just let me start by saying that the National Academy of Sciences has not recommended evaluating organohalogen flame retardants as a single class for purposes of further assessment for purposes of hazard assessment and has instead recommended sorting OFRs into subgroups for purposes of further assessment. In addition, a 2020 report from Sofies highlights that plastics from electronic and electrical equipment containing brominated flame retardants can be readily recycled.

NAFRA has mentioned previously any regulations for flame retardants and casings and enclosures of electronic and electrical equipment should align to the greatest extent possible with those that are already in place in other states at the federal level and internationally. For example, there are regulations at the state level and internationally for electronic displays that may be worth reviewing in that regard.

Relatedly, there is a need to ensure that any regulations prevent the creation of international technical barriers to trade. The draft rule was notified by the U.S. government to the World Trade Organization Technical Barriers to Trade Committee earlier this month and suggests more coordination may be needed so there is appropriate regulatory alignment. In addition, the scope of any regulation should be targeted and specific. At present, the department has not specified individual finished products or individual chemicals for the regulation of OFRs in electronic casings and enclosures. This could lead to confusion for the value chain.

Also, electric and electronic products is not specifically defined in the draft rule. The underlying statute does define electronic products, which is a more narrow subset of products than what may currently be envisioned for regulation by the department.

Finally, any regulations are required to be the least burdensome alternative to achieve the general goals and specific objectives of the program. NAFRA asserts that there are less burdensome alternatives for flame retardants and electronic casings than what is proposed in the draft rule. NAFRA appreciates the time to comment and plans to submit comments by the deadline. Thanks.

10. Heather Trim, Zero Waste Washington

Yes, I was not going to testify today, but I will since you have a little moment here. This is Heather Trim with Zero Waste Washington. Our goal is to keep things out of the landfill, which means that we really, really need to make sure that we are not recycling toxic chemicals into new things either through recycling, but also through reuse, which is a very large initiative we're trying to do now in terms of creating a circular economy in Washington.

It has all sorts of other side benefits in terms of the uses that people can get out of things with extending the life and greenhouse gas savings by extending the life of materials. I am concerned that the rule does not currently include the PFAS and the outdoor furniture. That is definitely part of what we're trying to incentivize on terms of reuse and recycling. I really encourage you to include that. Thank you so much.

11. Laurie Valeriano, Toxic-Free Future

Yes. This is Laurie Valeriano, Toxic-Free Future again. I just want to reiterate, I read the testimony on behalf of Brandi Hyatt and I've been working on toxic chemicals and health for nearly 30 years. Unfortunately, I've had so many opportunities to work with communities that have had contamination, whether it's from PFAS or other chemicals.

This rule and this law and the reason that we are so supportive and worked so hard to establish this important law is that this is our biggest opportunity to protect health of people as well as vulnerable populations, species, whether it's orcas or salmon. The communities are relying on us that we have to stop the poisoning. We have to stop putting chemicals into the environment that we can't clean up, that we can't dispose of.

I want to reiterate the point that Cheri Peele made earlier in that, the levels-- We can't allow thousands of parts per million of these chemicals in products going forward because they're going continue to plague us just like PCBs. We've seen this time and time again. I just want to emphasize, I can't emphasize enough that the levels have to be as close to zero as possible. To be consistent with children's safe products, that's what intentionally added is, it's above the method level of detection. Please consider that to be consistent with our own laws.

Secondly I want to say that the legislature established organohalogenes as a class. We strongly, strongly urge the agency to keep organohalogenes as a class because that's what the legislature said. Again, we've seen time and time again the substitution of flame retardants, one for the other, that are just as bad as the one that we banned. It's time to end that toxic treadmill.

Finally, I think that it's time for other states and other places to align with the state of Washington. Because Washington has the most proactive, most precautionary, prevention-based approach that's not only going to protect the health of people and our orcas and our salmon, but it's also going to save millions and millions and millions of dollars because we're not putting these chemicals into the environment in the first place.

It's time for the world to understand that the solution is prevention and the solution is to assess these chemicals by hazard and remove the ones that are highly hazardous, especially the ones that are extremely persistent and we can't deal with. I just wanted to reiterate those points. I really thank the agency for all their incredible time and everything that was put into this rule. That's the end of my comments. Thank you.

12. Linda Birnbaum, Scholar in Residence at Duke University

Thank you very much, everyone. My name is Linda Birnbaum. I am a scientist emeritus and former director of the National Institute of Environmental Health Sciences and also the former director of the National Toxicology Program. At this point, I am a scholar in residence in the Nicholas School of the Environment at Duke University. I'd like to comment on the complex class of organohalogen flame retardants and remember why they are supposedly added to products, which is to slow down the start of combustion. This class involves both chlorinated and brominated and sometimes mixed chloro-bromo compounds as well.

I think we need to go back and look at the history here just a minute and remember that brominated tris was banned by the Consumer Product Safety Commission in the 1970s because of its carcinogenicity and high immunogenicity in animals. However, some of that, while it was then in kids' pajamas, it's still used in other things as are the chlorinated tris, which have also been restricted by certain places. Many of these compounds have a very broad range of health effects, including cancer, endocrine disruption, developmental and reproductive effects, effects, for example, on the liver and effects on the immune system.

As well, and I think very important effects on the nervous system, especially the developing nervous system. It's not just much of the focus for flame retardants has been on the brominated flame retardants. I would like to stress that the organophosphate flame retardants are also extremely concerning. They are structurally related and have some of the same effects as something like Chlorpyrifos, a notorious pesticide. There is increasing evidence that they are highly developmentally neurotoxic. These flame retardants are found in dust, in food, in air, in water, in soil.

When you actually do have a fire, what you find is that they generate even more toxic dioxins and furans both brominated and chlorinated, as well as increase the amount of smoke. While the flame retardants may slow down ignition when they are used at a very high percentage in the products at the less than 5%, often in the 1% range in which they are often used, they really have almost no effect on combustion as all. That all being said and I think it's important that if they are allowed or are used, the concentration in which they are used is as low as possible. We have a history of unfortunate substitution.

While you may hear that the polymeric forms of these are not a problem and I would agree that they will not be taken up by our bodies or by wildlife, however, in the production and in the lifecycle analysis, you release monomers, which can have all these effects. I do want to state unequivocally that while the National Academy of Sciences opined that they did not think you could treat these as a single class, they thought it was absolutely appropriate to treat these compounds in a limited number of subclasses. Thank you very much. Always happy to answer questions if possible.

13. Kathy Preciado-Partida, MD Retired Obstetrician-Gynecologist

Hi, I'm Kathy Preciado-Partida. I'm a recently retired obstetrician-gynecologist, and I'm here to strongly support the Department of Ecology's proposed restrictions on Safer Products for Washington. I've spent my entire professional career safeguarding pregnant women, safeguarding their hopes to build strong and healthy families. What good does it do a woman to jump through all the hoops that she must do in order to obtain good prenatal care if there are these carcinogens and chemicals that can adversely affect her immune system, the baby's immune system, even potentially the impact of vaccination against, for instance, COVID.

As a mother and as a doctor, I think this is a very important process that our state is engaged in. These proposed bans will stop pollution at the source ending the use of some of the most dangerous chemicals and products from PFAs to toxic flame retardants, as Linda has just spoken about. For PFAs, which are so highly persistent, it is particularly urgent for action given that detections of these chemicals in breast milk are doubling every four year. Stopping the use of the most harmful chemicals makes a lot more sense than trying to clean it up at the end of the pipeline or once it contaminates people and the environment. Thank you so much for your time.

14. Ben Gann, American Chemistry Council (ACC)

Thanks, everyone. I'll be brief here. I'm Ben Gann, the director at the American Chemistry Council here today representing ACC's North American Flame Retardant Alliance or NAFRA. NAFRA continues to advance scientific understanding of OFRs. NAFRA has already submitted to the Department of Ecology GreenScreen risk assessments for two OFRs. Both of those OFRs have been scored as benchmark 2's under GreenScreen.

In addition, NAFRA plans to submit additional technical information regarding OFRs including as it relates to smoke toxicity during the comment period for the consideration and review by the department. Because I think most of this group knows and has already been highlighted, the National Academy of Sciences has found in its 2019 report that OFRs cannot be treated as a single class for purposes of hazard assessment. Instead, the NAS has recommended that OFRs be sorted into 1 of 14 subgroups based on chemical structure, physical chemical properties and predicted biologic activity for purposes of further assessment.

Product manufacturers must balance the need to meet consumer demand for smaller, lighter, more powerful electronics with the need to ensure that those devices meet

performance and safety standards. Flame retardants including OFRs are used in electronics and meet flammability standards and other product performance requirements. OFRs are a technology that can help prevent sustained ignition and in the event that ignition does occur, to slow the spread of fire. Design and performance are important considerations for product manufacturers. When designing products original equipment manufacturers consider specific plastic resin types in the flame retardant systems that are appropriate for those resins.

Simple substitution of retardants is not always possible. Using electronics as an example, switching from the use of OFRs to alternatives such as phosphorus flame retardants also requires a change in the resin that's been utilized. Such product design changes also necessitate with recertifying products to meet appropriate safety standards. Notably, the department has not proposed restricting the use of OFRs. The casings and enclosures for outdoor electronic and electrical equipment due to considerations related to weatherization.

OFRs are often a preferred flame retardant option when product manufacturers have performance criteria to meet related to UV exposure, extreme fluctuation of temperature or moisture management. However, moisture management can also be a factor for electronic and electrical equipment used indoors. Consequently, OFRs may be the most appropriate design option for use in casings and enclosures for some indoor, electronic and electrical equipment. Department should consider a broader set of performance and design criteria regarding the use of OFRs and casings and enclosures for indoor products, just as it has for outdoor products. NAFRA appreciates the opportunity to address the department and looks forward to continuing to gauge on this support issue. Thank you for your time in considering that response.

15. Derek Swick, Can Manufacturers Institute (CMI)

Will do. Hello. Sorry, my hand is up. It looks as if my hand is up. You would think after COVID we would have this down right. Good evening. My name is Derek Swick, Vice President of Regulatory and Technical Affairs for the Can Manufacturers Institute, CMI. CMI is the national trade association representing can makers in the US and their suppliers. In short, I have one comment to make on the proposed rule with regard to the reporting requirement for food can linings and this comment relates to really the applicability of the requirements and a request to Ecology to refocus the obligation of the rule, the requirements on retailers.

Simply put within the respective supply chains a can lining company or the company that makes the interior can lining or the can manufacturer does not necessarily know the specific lining or the specific can for a food or drink product. Also, we don't believe that food or drink fillers will know exactly what products are being sold in Washington. It's our understanding that it's really the retailer at the point of sell that would have the knowledge of what is sold in the state.

As such, we would again, suggest that the appropriate point of application for all obligations for the bisphenol reporting requirement is at the retailer level as the retailer

sells the product to the consumer. We will follow up with some additional written comments, but we do see this as a very a difficult obligation as you look at the can maker and the can lining company. Thank you for your time and thank you.