



**Testimony of  
The International Association of Fire Fighters  
Washington State Dept. of Health: Flame Retardant Stakeholder Advisory Committee  
September 28, 2018**

Good afternoon, Mr. Chairman and members of the Department of Health advisory committee. Thank you for allowing the International Association of Fire Fighters (IAFF) to comment today on the topic of flame retardants. My name is Lawrence Petrick Jr. and I am the Deputy Director for Occupational Health, Safety and Medicine.

I am here representing the IAFF, an international union that represents over 310,000 paid professional fire service employees in the United States and Canada. The IAFF serves to protect our members and have been actively involved in improving the health and safety of fire fighters for 100 years. This is a critical activity for a workforce in which fatalities and early retirement due to work-related injuries and illnesses occur regularly.

This September, at the Fallen Fire Fighter Memorial service in Colorado Springs, Colorado; 168 fire fighters were added to the hallowed granite walls who died in the line of duty in year 2017 and 129 of those died from occupational cancers.

Fire fighters dying from occupational-related cancers now account for more than 60% of the line-of-duty deaths each year, per our statistics. This is the largest health-related issue facing the firefighting profession today, and we must reduce this number.

In the vast majority of US workplaces, toxic occupational exposure levels have greatly declined in the past 2-3 decades. Improved workplace conditions can be attributed to many factors including training programs, governmental agencies and most importantly legislation.

Unfortunately, fire fighters have not benefited from this overall improvement, as they are still entering uncontrolled, hazardous environments regularly. More and more studies have come out examining the complex mixture of chemicals found in smoke composition and combustion products that fire fighters commonly encounter, and the studies have clearly documented reasons for concern about these exposures. Recent studies have also shown that fire fighters have higher levels of flame retardant chemicals in their body than the general population.

Fire fighters come into contact with toxic flame retardants in their daily lives, just like the rest of the population. But they have a much higher risk of exposure to the flame retardants, especially when those chemicals burn in a fire. Fire fighters are exposed to the products of combustion (which includes flame retardants) while extinguishing the fire, during the overhaul of fires, through dermal absorption during and after fire suppression, and after the incident as they are exposed to off-gassing from toxic soot that covers their turnouts and equipment. Research has characterized flame-retardant contamination on fire fighter personal protective clothing. It is the IAFF's position that this exposure contributes to the reason that our members have a significantly higher incidence rate of certain types of cancer.

The IAFF supports efforts to remove toxic flame retardants from furniture and consumer products, and supports efforts requiring manufacturers of such products to utilize alternative technologies in lieu of toxic chemicals. It is known that when burned, flame retardants are found to contribute to the development of cancer and they have been linked to various other negative health effects associated with the nervous, reproductive and endocrine systems.

The National Institute for Occupational Safety and Health (NIOSH) recently conducted a landmark study of cancer among U.S. fire fighters that included data from over 30,000 career fire fighters employed between 1950 and 2010. The research found that fire fighters compared to the general US population had statistically significant increases in both diagnosis and death from certain cancers.

In the recently published Fire Station Dust Study researchers found that brominated flame retardants and organophosphate flame retardants levels in fire station dust appear higher than other occupational and residential settings. Another study supports these findings as their results show that the median level of flame retardants in California fire stations were higher compared to homes in the same state.

Flame retardant concentrations have been measured in numerous studies. A current interim report published by the Illinois Fire Service Institute indicates that TBB, TBPH and TPP air concentrations are high as measured during active fire and TPP remained high during overhaul. The Firefighter Occupational Exposures (FOX) Project which is the largest study of fire fighter exposures to date on flame retardants, reported that brominated flame-retardant levels were found higher in fire fighters than in adult men in the general U.S. population.

Given the increasing body of evidence that indicates the persistence, bio-accumulation and potential health concerns of fire retardants, we believe the health risks associated with the use of these chemicals is greater than the fire risk without using these chemicals. This is because some flame retardants can remain unchanged in the environment for long periods of time without breaking down, and resulting in continuous exposures during and after working at a fire.

With this information, and the increasing rates of cancer in the fire services, the IAFF supports the efforts that the State of Washington should ban the use of halogenated and phosphorous

based flame retardants in children's products, furniture, mattresses, and electronics enclosures, to be consistent with the action taken by the Consumer Product Safety Commission, of which the IAFF supported.

In closing, the IAFF will continue to fight for the elimination of these toxic chemicals.

Removing flame retardants from furniture and consumer products is a positive step forward in protecting first responders from the harmful effects of these toxic flame retardants. Thank you for allowing first responders to have a voice in protecting our job environment while still maintaining the highest level of fire protection for the citizens we protect every day.