

# INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS



Statement of

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before the

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United States House of Representatives  
on

Mismanaging Chemical Risks: EPA's Failure to Protect  
Workers

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Thank you Chairman Tonko, Ranking Member Shimkus and distinguished members of the Subcommittee. My name is Patrick Morrison and I am Assistant to the General President for Occupational Health, Safety and Medicine of the International Association of Fire Fighters (IAFF). I appreciate the opportunity to appear before you today on behalf of General President Harold A. Schaitberger and the over 316,000 professional fire fighters and emergency medical personnel who serve as this nation's domestic defenders. Over the last 100 years, the IAFF has been and continues to be the nation's leading voice on health and safety issues impacting the fire service. Our work helps ensure our members are as healthy and safe as possible on the job through access to proper education, training, annual medical exams, exposure prevention techniques and the latest research.

I come before you today to offer my testimony on how fire fighters and other workers are being harmed due to the Environmental Protection Agency (EPA) systemically ignoring exposure risks in its loose implementation of the Frank R. Lautenberg Chemical Safety Act and other laws.

Our members risk their lives every day to protect the communities they live in, but the risk of injury responding to burning buildings, transportation accidents, aircraft emergencies and wildfires is not the only aspect that makes fire fighting a dangerous occupation. Our members face significant chemical exposures on the job due to the vast quantity of chemicals added to building materials, consumer products and the equipment our members use every day. Many of these chemicals have been linked to cancer and other negative health concerns. Fire fighters dying from occupational-related cancers now account for 65 percent of the line-of-duty deaths each year as reported to the IAFF. This is the largest health-related issue facing the fire fighting profession. Fire fighters, like other Americans, have put our trust in the EPA to regulate these toxic chemicals, but unfortunately, have witnessed only modest efforts by the current Administration to protect the health and well-being of workers exposed to such chemicals.

In 2016, Congress passed, and President Obama signed the Frank R. Lautenberg Chemical Safety Act for the 21<sup>st</sup> Century (TSCA), updating the outdated Toxic Substances Control Act originally passed in 1976. The IAFF worked closely with Congress to pass this important bill with the hope that it would spearhead long overdue work at the EPA to regulate the toxic chemicals our members are exposed to daily. Unfortunately, in the years since TSCA's passage, little progress has been made. Specifically, we are disappointed in the EPA's failure to evaluate all susceptible subpopulations and address the use and disposal of legacy chemicals.

As the Subcommittee is aware, TSCA mandated the EPA initiate ten risk evaluations of chemical substances to determine if such substances present an unreasonable risk of injury to health or the environment, including unreasonable risks to potentially exposed or susceptible subpopulations, under the conditions of use. We were pleased that the EPA included both asbestos and Hexabromocyclododecane (HBCD), or Cyclic Aliphatic Bromide Cluster, a flame retardant, as two of these first ten chemicals. Fire fighters are regularly exposed to these chemicals through their work.

Asbestos becomes airborne when disturbed or damaged by fire. Fire fighters enter burning buildings, extinguish fires, and open walls and ceilings to check for fire extension; all three tasks expose fire fighters to asbestos fibers. These activities are daily occurrences, and while the asbestos to which they are exposed is legacy, these are technically new exposures. After the initial exposure, asbestos fibers can remain on the turnout gear and station clothing and spread to apparatus cabs and fire stations. Fire fighters can inhale large amounts of these microscopic fibers, and unknowingly increase their risk of developing an asbestos-related disease such as mesothelioma, lung cancer, and asbestosis.

Fire fighters are currently exposed to HBCD as they regularly encounter consumer products and building materials where it was used, under extreme heat conditions as part of their occupation. Furthermore, research indicates that fire fighters have multiple exposure sources. They are exposed at the scene of a fire, through residue on their protective equipment (off-gassing) and from the contaminants they bring back to the station. Fire fighters are exposed through all main exposure routes - inhalation, dermal and oral - which increases their susceptibility to HBCD.

The IAFF presented evidence relating to fire fighters' exposure to asbestos and HBCD and the associated health problems linked to occupational exposure in response to the EPA's Scope of the Risk Evaluation documents released in June, 2017. These documents included fire fighters as a susceptible subpopulation and included legacy uses as part of the evaluations.

Unfortunately, despite the clear danger asbestos and HBCD pose to our members and their demonstrable regular exposure, the EPA failed to include fire fighters as a susceptible subpopulation in their Problem Formulation document for asbestos released in May, 2018. The HBCD Problem Formulation document was more general, stating EPA will evaluate susceptible subpopulations, including occupational nonusers. Furthermore, the EPA also removed the evaluation of both legacy HBCD and legacy asbestos, including disposal, from such documents. We find these omissions unfathomable. With their removal, EPA is no longer evaluating a large population of workers experiencing regular and significant exposure.

According to TSCA § 3(12), "The term 'potentially exposed or susceptible subpopulation' means a group of individuals within the general population identified by the Administrator who, due to either greater susceptibility or greater exposure, may be at greater risk than the general population of adverse health effects from exposure to a chemical substance or mixture, such as infants, children, pregnant women, workers, or the elderly." The law directly states that workers are included in this category and should be evaluated. Fire fighters face high exposures to asbestos and HBCD daily as part of their occupation, and therefore qualify as a susceptible subpopulation and should be evaluated.

Additionally, according to TSCA, the EPA must evaluate the entire lifecycle of a chemical. TSCA § 3(4), relating to the condition of use states, "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to

be manufactured, processed, distributed in commerce, used, or disposed of.” From the moment HBCD and asbestos enter the market until they are disposed of, the EPA should be evaluating them through the entire lifecycle.

Unfortunately, removing the legacy use of asbestos and HBCD from the EPA’s evaluations will almost certainly skew the evaluation’s results. Especially as it relates to workers, the bulk of exposures to asbestos and HBCD are a result of legacy use. Further, from the fire fighter’s perspective, such exposures are not “legacy” but occurring today. As I mentioned previously, fire fighters are currently exposed to these chemicals as a routine part of their occupation and will continue to be unless all asbestos is remediated and HBCD is no longer used in consumer products and building materials.

In the Problem Formulation document for asbestos, the EPA addressed the removal of fire fighters by stating, “In the Scope document, fire fighters were also included as a potentially exposed or susceptible subpopulation. However, fire fighters will be exposed to materials that are predominantly legacy uses, which will not be evaluated in the risk evaluation.” This is very alarming to us, because the EPA is aware of our exposures and aware of the associated health concerns, but they are choosing the easy route by excluding both legacy use as well as a major susceptible subpopulation.

Current research supports the need to evaluate legacy asbestos. National Institute for Occupational Safety and Health (NIOSH) conducted a cohort study and published two publications; *Exposure–Response Relationships for Select Cancer and Non- Cancer Health Outcomes in A Cohort of US Firefighters from San Francisco, Chicago and Philadelphia (1950–2009)* and *Mortality and Cancer Incidence in A Pooled Cohort of US Firefighters from San Francisco, Chicago and Philadelphia (1950– 2009)*. The study evaluated 30,000 fire fighters over a 60-year timeframe, and it was the first study ever to identify an excess of mesothelioma in U.S. fire fighters. The multi-year study identified that the population of fire fighters in the study had a rate of mesothelioma two times greater than the rate in the U.S. population as a whole. Also, the findings show that malignant mesothelioma is largely attributable to asbestos exposure, with sparse evidence of other causes.

These findings have been helpful, but without federal guidance on this chemical, our members are constantly exposed and not always aware of what they are being exposed to. In August 2017, fire fighters from the Honolulu Fire Department responded to a 7-alarm fire, where they had no knowledge that asbestos was present. It wasn’t until after the fire that members were notified of potential asbestos exposure. The result of the late notification was mass bagging of gear, thorough cleaning and the fear of the unknown health effects associated with this massive exposure. As a result, over 100 fire fighters may have been exposed and subjected to an increased risk of health effects.

Similar situations occur daily across the United States. Asbestos is in many old buildings, so while fire fighters may not be exposed to it as a new use in an industry setting such as a chlor-

alkali plant, the exposures remain current and deadly; the EPA must act to protect this susceptible subpopulation.

As regards the nonspecific language regarding susceptible subpopulations in the HBCD Problem Formulation, we are hopeful the EPA will include fire fighters in its scope. Recent research shows flame retardants are not as effective as once thought and are ultimately causing more harm than good with associated health effects, particularly in fire fighters.

While the IAFF is disappointed in the removal of legacy uses for asbestos and HBCD and the exclusion of fire fighters as a susceptible subpopulation for asbestos, we do support the EPA's continued evaluation of HBCD in Expanded Polystyrene (EPS) and Extruded Polystyrene (XPS) foam, as this type of insulation can be found in many residential, public, and commercial structures. This is also a current exposure for our members. Evaluating these foams will result in more information and a better understanding of exposure routes and the associated health effects of these chemicals.

While TSCA is among the highest profile chemical legislation that has directly impacted our members, it is not our only concern. Recently, Congress has noted the dangers associated with Per- and Polyfluoroalkyl Substances (PFAS). Under this large class of chemicals are perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), two of the most persistent and most widely studied PFAS chemicals. They are also our biggest concern because of its presence in AFFF fire fighting foam, primarily used at military bases and airports, older protective clothing, and potentially in newer protective clothing.

There is evidence suggesting PFAS can cause tumors in lab animals exposed to very high doses, particularly in the liver, reproductive organs, and pancreas. Studies among highly exposed populations have shown a more than insignificant risk of testicular, kidney, bladder, and thyroid cancer related to PFOA and PFOS exposure. The International Agency for Research on Cancer (IARC) classifies PFOA as a Group 2B carcinogen, meaning it is "possibly carcinogenic to humans" based on limited evidence.

Studies on non-cancer health effects are also limited due to small study populations and inconsistent results. However, research suggests that high exposures to PFAS are associated with developmental effects during pregnancy or breastfeeding, thyroid damage, increases in blood cholesterol levels, and liver damage. PFAS are corrosive and can cause damage to the skin and eyes, including blindness.

In 2006, the EPA instituted the voluntary PFOA Stewardship Program that resulted in the almost complete elimination of PFOA and other long-chain PFAS production by eight major fluorochemical manufacturers by 95% by 2010 and entirely by 2015. However, this only applied to eight major companies, not every company that produced PFOS/PFOA or companies importing the chemical. Therefore, there are existing stocks of fire fighting foam containing PFOS/PFOA chemicals still being used. While the Stewardship program helped the market move in the right direction, it was not a mandatory program and therefore PFOS/PFOA products are

still in use today. Since the EPA did not require these chemicals be banned, we are now seeing individual states doing the EPA's job and eliminating the chemicals on their own.

The EPA has also attempted to regulate these chemicals twice. In 2007, the EPA issued a Significant New Use Rule (SNUR) regulating a significant number of PFAS chemicals. This effort was specific to PFAS chemicals' reporting requirements, and did not restrict the use of existing stocks of legacy AFFF fire fighting foam containing long chain PFAS chemicals. In 2015, the EPA proposed another SNUR for PFOA and other long-chain PFAS as a regulatory follow-up to the voluntary PFOA Stewardship Program. Regrettably, this SNUR has yet to be finalized.

Without the EPA's guidance and because of limited environmental and toxicological research on these chemicals and replacement chemicals, some manufactures are switching to modern fluorotelomer AFFF containing only short-chain PFAS and other fluorinated Class B foams. Unfortunately, limited research exists on these chemicals, and data that do exist are cause for concern. The IAFF believes that the EPA should study these chemicals and their replacements to better learn how they affect exposed workers.

We are also aware that the EPA is starting to work on their PFAS Action Plan to outline concrete steps to address PFAS and to protect the public health. We think this is a long overdue project, as these chemicals have been used since the 1940's. Unfortunately, we are disappointed that yet again, the EPA is neglecting to look at the worker perspective. The EPA's Plan addresses communities affected by fire fighting foam runoff, but they are not looking at the subgroup of airport and military fire fighters that are constantly using these foams and exposed to these chemicals on a regular basis.

Lastly, I would be remiss if I did not express concern with the use of these chemicals in consumer products. PFOS production continues outside of the United States in China and India under no existing regulation, so imported products can contain these toxic chemicals. This impacts fire fighters. As these materials burn, fire fighters are exposed to the toxic byproducts of combustion.

Since there is little federal oversight on this topic to protect workers, we are taking matters into our own hands. Currently, the IAFF is sponsoring three research projects relating to PFAS:

- **Per/Polyflouroalkyl Substances (PFAS) Blood Study:** The IAFF has sponsored a study on the amount of PFAS within fire fighters' blood to determine if it is greater than the general population.
- **U.S./Canadian Fire Station PFAS Dust Study:** Dust samples from fire stations that were previously collected and analyzed will be reanalyzed for PFAS.
- **Testing turnout gear material for PFAS:** Select outer shell, thermal barrier and moisture barrier materials will be tested for PFAS.

These IAFF research projects will provide more comprehensive information about whether these toxic chemicals are in our gear, if various other carcinogens encountered on the fire ground are the source, or if it is a combination of both.

Congress is also beginning to address these issues. In October, 2018, Congress passed and the President signed into law, the FAA Reauthorization Act of 2018. The bill included a provision allowing municipal airports to discontinue use of fluorinated fire fighting foams. We fully supported this provision as it can move the industry away from this class of toxic chemicals and better protect airport fire fighters from exposure. We also understand a number of bills relating to PFAS exposure are in various stages of development, and look forward to continue working with Congress to address this critical issue.

While we are frustrated with the continuous neglect from the EPA, the IAFF will continue working with legislators and other decision makers to address our concerns with these chemicals and their use. We will continue to research these topics and evaluate additional studies to ensure our members have the latest information to protect themselves and remain safe on the job.

In conclusion, on behalf of the International Association of Fire Fighters, I appreciate the opportunity to testify today. We are committed to continue working with the EPA and Congress to better protect our members from the risks posed by toxic chemicals. To the extent that I or the IAFF can assist the Subcommittee in these efforts, I am happy to offer our expertise and pledge to work closely with you and your staffs.

Again, I'd like to thank the Subcommittee for the opportunity to testify today and am happy to answer any questions you may have.