

## IAFF 55<sup>th</sup> Convention Resolution 28 – Toxic Chemicals In PPE

The virtual 55th IAFF Convention begins on January 25, 2021. There will be a few dozen resolutions heard on the convention floor, and the purpose of this article is to introduce and expound upon “Resolution 28 – Toxic Chemicals in PPE.” This resolution will provide firefighters with safer alternatives for personal protective equipment (PPE) and ensure that PPE is not made with PFAS chemicals that threaten the health of firefighters and the communities they work in. Firefighters are being treated like lab rats - they are knowingly exposed to chemicals of both known and unknown toxicity.

The Precautionary Principle, which states that we should strive to reduce risk from chemicals in the face of uncertain but suggestive evidence of harm, seems like an inarguable concept. However, this idea is ignored every day in this country. Chemicals are created in labs and allowed to be used in all kinds of products that we wear and otherwise use in daily life. These chemicals are not regulated, sometimes not even adequately studied, and many of them eventually make their way into our water, our food, and our blood.

As firefighters we are exposed to many dangerous chemicals - via smoke, diesel exhaust, hazmat incidents, and our PPE. There is no doubt that all firefighter turnout gear that is certified to NFPA 1971 contains PFAS. There is also no doubt that PFAS fall into two categories: (1) toxic, and (2) believed to be toxic but not yet studied. The chemical, textile, and PPE industries state that “not all PFAS are bad,” but I have yet to hear them follow that up with a list of the good ones. The truth is, once a particular PFAS is proven harmful, manufacturers simply make a small adjustment, create a new PFAS, and use this new chemical as a replacement. They argue the replacement is “safe” not because it has been proven to be, but because there have not been studies to prove it is dangerous. The world of legitimate, independent scientists call this a “regrettable substitution.”

As expected, we have begun to hear the counter argument to our resolution. One point recently raised was that many representatives of turnout gear manufacturers are firefighters themselves and are also exposed to this gear. This resolution is not stating that everyone involved in the chemical, textile, and PPE industries is involved in some sort of conspiracy to spread cancer. We agree that many in the industry are good people, and we are just as concerned for their health as our own. In fact, I have spoken to some of the fine people in the turnout gear and textile industries and they have told me to keep fighting because we are on the right path.

A simple Google search will offer evidence of how chemical manufacturers have treated their own employees. For example, DuPont and Solvay exposed their workers to PFAS for decades, knowing they were contaminating the blood of those employees. Instead of eliminating these chemicals and seeking medical monitoring for their employees, they chose to hide the studies and continue producing these chemicals. They also disposed of the chemicals in the surrounding communities and exposed thousands to their effects. Those employees are also the people we are trying to help.

It was also recently stated by Chief Bobby Halton on Fire Engineering’s Humpday Hangout that we are “ascribing motivation” to the representatives of the turnout gear industry, meaning that even if these chemicals are causing harm, this has all been unintentional, and that we are

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declaring otherwise. While it is true that these chemicals were discovered accidentally, and the toxicity was initially unknown – that was 70 years ago. The chemical industry has known of the harm associated with PFAS exposure for decades. They have a clear track record of hiding the evidence of that harm, including the impact on their own employees. The chemical industry’s motivation may not be to outright cause cancer; it is clear, however, that their motivation is to protect their products and continue to make billions of dollars. Thanks to the work of attorney Rob Bilott, and his book “Exposure”, we know that Dupont’s own internal documents reveal that they were aware as far back as the 1980’s that PFOA “could permeate all protective materials eventually”. They even instituted new protective measures for their employees that included the use of disposable gloves and clothing. So, long before PFOA was used to manufacture firefighting textiles, DuPont knew the harm it could do, and yet they remained silent and allowed it to be used in textiles that firefighters wear for their entire careers. Think of that the next time you see a representative from DuPont praised on stage at an IAFF Cancer Summit.

The fact that there are some in the fire service who choose to ignore the facts (which are easily found in the industry’s own documents) and allow this to continue is concerning. These industries are now represented by the same product defense firms who once argued on behalf of the tobacco industry that smoking is safe and not related to cancer. These product defense firms exist to manufacture their own science and create doubt – and it is clearly working.

What follows is a breakdown of each section of “Resolution 28 – Toxic Chemicals in PPE” as it was originally submitted. There will be some slight amendments in the final copy to be heard on the convention floor. We drafted this resolution to address the PFAS issue, but it could (and should) apply to all chemicals of known and unknown toxicity. Today it is about PFAS, but in the future it could be about any other toxic substance which escapes regulation by the government, the EPA, and the NFPA as it makes its way into our lives.

### **WHEREAS, Cancer continues to be the leading cause of death among firefighters; and**

According to the IAFF Line of Duty Death database, in 2019, 140 of the 185 line of duty deaths (75%) were due to cancer. The goal of this resolution is to ensure our brother and sister firefighters have the information to better understand the chemicals in their PPE, while also ensuring efforts are made to provide them with safer alternatives in the future.

### **WHEREAS, per- and polyfluoroalkyl substances (PFAS) have been linked to cancer and other illnesses; and**

DuPont has been aware, since at least the 1960s, that PFAS were accumulating in the blood of their workers and were causing illness. They hid those discoveries from their employees and the entire world as they, and others, continued to produce PFAS which have now been found in the blood of nearly every human on earth. They have contaminated our water, our food, our blood, and now we know they have also contaminated our firefighting gear and equipment – even before it is exposed to products of combustion. Many studies have been conducted, and many are ongoing, but the hazards these chemicals pose to our health and the environment are clear.

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**WHEREAS, perfluorooctanoic acid (PFOA) was proven in a court of law to be linked to testicular cancer and many of the same illnesses which are affecting firefighters at alarming rates; and**

As seen in the movie “Dark Waters,” the documentary “The Devil We Know,” and the book “Exposure” by Rob Billott, PFOA, which is just one of potentially more than 9,000 PFAS, is linked to testicular cancer, kidney cancer, pre-eclampsia, thyroid disease, ulcerative colitis, and high cholesterol, after conducting the largest epidemiological study in history. As many firefighters know, testicular and kidney cancer are two of the leading cancers affecting firefighters. PFOA is just one PFAS and it took 20 years of litigation to prove these links and convince major PFAS manufacturers to phase out their use of PFOA. Unfortunately, PFOA still exists, as it is still manufactured outside the US and imported for use here, and because of the use of precursors, which are other PFAS that will degrade and turn into PFOA. These precursors to PFOA have been found in our PPE. Since PFAS do not break down, when expired or retired gear is put in a landfill, these chemicals will eventually contaminate the soil and groundwater. Our children will be drinking the chemicals from our gear.

**WHEREAS, the personal protective equipment (PPE) industry voluntarily phased-out the use of PFOA by 2016, but failed to alert firefighters of the dangers associated with PFOA exposure; and**

Despite the link between PFOA and cancer, there are no government regulations regarding its manufacture or use. The EPA has failed to act for reasons which are described in the movies and book mentioned earlier. However, 8 major manufacturers in the US voluntarily agreed to phase-out the manufacture of PFOA by 2016 because of the findings of the C8 science panel. Precursors which will eventually form PFOA have not been addressed. This voluntary phase-out is the reason we focus on PFOA, but other PFAS chemicals including the ones used in place of PFOA, have also been found to be toxic. As for PFOA itself, since it was not entirely phased out by major manufacturers until 2016, firefighters will continue to be exposed until 2026 based on the 10-year life of turnout gear per NFPA 1971. If we do not completely eliminate the use of all PFAS, firefighters will continue to be exposed to PFOA via its precursors as well as all of the other PFAS which are still used.

PFOA is also known as C8 and refers to PFAS with a backbone of 8 carbons (these are also called "long-chain" PFAS). C6 refers to PFAS with 6 carbons (C6 or fewer carbons are generally referred to as "short-chain"). While it is true that PFOA was partially phased out, the industry simply changed a few atoms and now uses C6 in its place. Because C6 is not quite as effective as C8, they use more of it to continue to get the desired effects. They will tell us that C6 is perfectly safe, but there are many who disagree. Replacement chemicals may be *different*, but that fact alone is clearly not a testament to their safety.

**WHEREAS, the PPE industry has replaced PFOA with other PFAS chemicals which have not yet been adequately studied, but are also thought to be harmful to human health and the environment by an independent and impartial community of scientists; and**

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The industry repeatedly claims that “not all PFAS are bad.” But what they really mean is that not all PFAS have been studied; the ones that have are all found to be hazardous to humans and the environment. Many independent scientists agree that there are no good PFAS; some may not be as bioaccumulative or persistent as others, but that does not make them safe. Instead of using the precautionary principle, which states that we should use caution in the face of uncertainty, the industry prefers to produce these chemicals and claim they are safe without adequate analysis. They have already shown a track record of simply switching to another PFAS when one is proven harmful. We must treat PFAS as a class instead of taking them one by one, which would take hundreds of years, and could mean thousands of firefighters lost. One PFOA replacement, PFBA, was recently found to accumulate in the lungs. The industry has touted the safety of replacement PFAS like PFBA because they exit the bloodstream faster than PFOA and other long-chain PFAS. Now we are learning that while PFBA leaves the bloodstream in just days, compared to years, it will accumulate in the lungs and is associated with more severe cases of COVID19. PFAS have also been shown to reduce the efficacy of vaccines, meaning firefighters at the front lines of this pandemic may be more susceptible to this virus simply because of PFAS exposure.

**WHEREAS, the PPE industry has long been closely associated with the IAFF through sponsorships and donations, while simultaneously providing firefighters with products containing unregulated toxic chemicals which may be contributing to the firefighter cancer crisis; and**

The cover of the 2019 Winter IAFF Quarterly Magazine shows a firefighter covered in soot and inside a burnt-out window with the words “Occupational Cancer” next to him. This issue is devoted to the firefighter cancer problem. Upon opening the magazine, the very first thing we see is a full-page advertisement for Globe boots with Gore waterproofing. There is no mention of the PFAS these boots surely contain. Page 6 is a full-page ad for Gore hoods, with no mention of the PFAS used in their manufacture. Page 16 is a full-page ad for Tencate PBI fabrics with no mention of the types or amounts of PFAS which are certainly found on those fabrics. There is then an article which contains one passing reference to PFAS regarding ongoing studies. That is the only time PFAS are mentioned in this entire magazine dedicated to firefighter occupational cancer. PFOA is not mentioned at all. On page 25 there is an article on the ALTS (Affiliate Leadership Training Summit) which includes a section of appreciation to the sponsors of the summit. The sponsors include Globe, Safety Components, Tencate, and Gore – all these companies sell PFAS-containing products to firefighters. Page 27 is a full-page ad for Innutex, a PPE manufacturer whose products contain PFAS. Pages 40-41 are dedicated to recent Line of Duty Deaths. Two full pages of names of firefighters who have left us too soon, many of them because of occupational cancer. It is concerning to us that many of the major advertisers in this magazine are selling products to firefighters which may end up placing our names among those at the end.

The IAFF 2018 Cancer Summit was held two years after the voluntary partial phase out of PFOA, and there was likely no mention of its toxicity. In May of 2017, the IAFF released a statement stating that PFOA “...did not pose a risk to end-users.” This quote came directly from communication with a manufacturer and via “personal communication” as the document

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citations show. The IAFF basing their position on information from the people who sell these chemicals was shortsighted and is a clear justification for why independent and unbiased science should be the *only* acceptable source of such important information.

The Cancer Summit was sponsored by Tencate, Gore, Globe, and DuPont. At this summit, a DuPont representative spoke about the company's concern for the health of firefighters. If the lunacy of seeing our IAFF's Health and Safety official praise a company like DuPont at a conference dedicated to cancer is not already evident, you need only to search "DuPont and cancer" on the internet and read up on the damage they have done. They have no business being in our conferences and magazines no matter how much they pay to be there. You can judge for yourself if the same level of concern for firefighters was shown by a DuPont attorney while under oath before Congress. This cancer summit speech, in front of our members who were there to take action against cancer in the fire service, also made no mention of the millions of people currently drinking contaminated water thanks to the chemicals made by DuPont.

These manufacturers who are our frequent sponsors and advertisers are also the same companies currently being sued by IAFF members in California for damages due to PFAS exposure from their turnout gear which they allege has caused their cancer, as seen here: California Foam & PPE Lawsuit.

**WHEREAS, it has been alleged that the PPE industry has utilized biased science conducted by the industry themselves, as well as distributing misleading and incomplete statements and documents which have obscured the facts uncovered by independent scientists and activists; and**

The industry distributes studies claiming fluoropolymers (ex. the Teflon found in the moisture barriers of all firefighter turnout gear) are of low concern, based on studies conducted by... themselves. Recent independent science is suggesting that not only are fluoropolymers concerning, but there is also evidence that they are able to enter the bloodstream, which has been denied by the industry.

While researching turnout gear with a specific desire to learn more about PFAS, I was able to speak directly to representatives of some of the leading textile and PPE manufacturers. As I learned more about the history of PFAS, I was hoping that these people would be able to convince me that this issue truly is overblown, and my concerns were not valid. However, every conversation I had, every document I was provided, and every scientific study provided by the industry only served to convince me otherwise. I will provide a few examples below:

Gore Exposure Assessment: This is a document that was given to me as proof of the safety of PFOA. The conclusion states "...potential exposures and associated risks of cancer effects are insignificant." The issue with this document is that it was based on a study conducted by toxicologists from DuPont, Chemours, and Ramboll. The lead author of the study, Steven Washburn, has testified on behalf of DuPont in numerous lawsuits. It should be unacceptable that the only evidence they were able to provide to convince me that PFOA is safe came from a study conducted by the people who created it.

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Gore “Independent Study”: This was a legitimate scientific study that was sent to a fire department as evidence that short-chain PFAS (C6) is not an exposure risk to firefighters. I researched the origins of the study and contacted the lead scientist. He is, by all accounts, an unbiased and independent researcher who can be trusted. The issue here is that he completely disagreed with his research being used to support the firefighting PPE industry. He told me that he studied PFAS degradation in soil, not textiles. He also stated that his study, used by Gore to convince a major metropolitan fire department that there is no risk in exposure to newer PFAS, has absolutely no relation to how these chemicals are used in firefighting textiles, and he does not agree with it being used in this manner.

Milliken White Paper: The Truth About Cancer Hazards and Turnout Gear is a white paper found on the Milliken website. It was also sent to me by a representative from Milliken as proof of the safety of C6. In fact, it even states that “these new materials have been shown to be significantly less persistent, and less harmful”. It also refers to C6 as having been “well studied and found to be extremely safe.” The preceding quotes are cited, and the sources can be tracked down in the references at the end of the document. Further research reveals that these statements come directly from studies conducted by employees of DuPont and Chemours. I spoke to one of the authors of this white paper and I asked him why every statement regarding the safety of newer PFAS comes from the people who make these chemicals. He did not have an answer, and he was unable to provide me with any other studies to support these claims. After a few minutes of searching, he finally found another study he could share, but admitted that it was also conducted by a chemical manufacturer.

This white paper is one of many industry-produced documents created in response to an article and emails that were sent out by Diane Cotter, wife of occupational cancer survivor and retired Worcester, MA Lt. Paul Cotter. After discovering that turnout gear contained PFAS, especially the known carcinogen PFOA, Diane began working to raise awareness. The industry countered with documents such as this white paper and the “Gore Exposure Assessment” in an effort to downplay the issue. Members of the NFPA 1971 Technical Committee also wrote articles in defense of the industry, based on information that came from...the industry. Recently released emails show representatives from Lion and Stedfast discussing Diane’s article and the need for “ammo” as they concocted their rebuttals.

They have no unbiased research to support the statements in this white paper. (An interesting item of note: the white paper refers to PFOA as having been phased out due to its “persistence in the environment, and the possibility that it can cause health issues at high concentrations.” This is the same PFOA that is deemed safe by the Gore Exposure Assessment.)

Lion: In an effort to demonstrate the safety of their turnout gear, they hired Exponent to conduct the research. Exponent is known as a product defense firm (they are hired to help manufacturers avoid regulation and litigation). Lion also hired a consultant named Paul Chrostowski. Dr. Chrostowski formerly worked for the Weinberg Group, another product defense firm famous for defending the tobacco industry as they denied links between smoking and cancer. Dr.

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Chrostowski even published an article in a fire service magazine in support of Lion. His article was rebutted by independent scientist Dr. Graham Peaslee. This rebuttal speaks for itself.

Dr. David Michaels' book "The Triumph of Doubt" details how the chemical, tobacco, and other industries use the same playbook over and over again in order to combat legitimate science in an effort to instill doubt in the minds of consumers who are undoubtedly harmed by their products. The playbook, and the players involved, have now made their way into the fire service.

**WHEREAS, the National Fire Protection Association (NFPA) Technical Committee has the authority to limit and/or eliminate the use of these toxic chemicals, but has failed to do so; and**

The 1971 NFPA Technical Committee includes voting members from the industry. These members decide how PPE is constructed and tested. We believe there is a clear conflict when members of this industry are allowed to be involved in a process which has a direct impact on which textiles are able to pass NFPA certification. A direct impact on their profits. There is also a belief from some on the committee that the industry needs to police themselves, a thought that is laughable and will only allow them to continue unchecked.

**WHEREAS, all firefighters, regardless of location, are affected equally by this issue, due to the constant and unavoidable exposure to toxic PPE which is intended to provide safety; therefore be it**

In his recently released study, Dr. Graham Peaslee found that every set of turnout gear he tested, whether new, old, used, or unused, contained high levels of PFAS. Every firefighter wearing turnout gear that meets the NFPA 1971 standard is exposed to these chemicals every time they touch or wear their gear. Studies have also found that the PFAS sheds from the fabric and is found in fire station dust, likely presenting an inhalation hazard.

Prior to Dr. Peaslee's study, the only information regarding turnout gear and PFAS came from industry-funded science. The May 2017 IAFF "PFOA and Turnout Gear" document even based its opinion on information provided by the industry. Letters attesting to the safety of our PPE, statements released on industry websites, and articles written in fire trade magazines were all based on information that originated inside the walls of chemical companies like DuPont, 3M, and Gore. They used mercenary scientists and product defense firms to create the illusion of legitimacy and disseminated all of this biased information to firefighters via our union and our favorite fire service websites. The reason we are only now beginning to see independent research being done is because Diane Cotter and Dr. Peaslee were able to pull together a very expensive study with assistance provided by The Last Call Foundation and volunteers. Without them we would not know any of this, as the IAFF and NFPA seemed content to allow the industry to have the only word. The study proved that our turnout gear contains high levels of an assortment of PFAS and it was the catalyst that pushed others to get involved. The industry has billions of dollars at their disposal and with the ability to spend those billions on rented white coats who defend toxic chemicals, they will surely continue to produce false science to counter the legitimate. It will be up to us to recognize the difference. The burden of proving these chemicals

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are: 1) present; and 2) toxic, should not be on NGOs, citizens, and firefighters and their families. The system in the U.S. is backwards: chemicals are innocent until proven guilty, and the burden of proving them guilty is on the public. In the EU, they are guilty until proven innocent...and that is what we need to do here.

**RESOLVED, That the IAFF will no longer accept sponsorships from the chemical industry, textile manufacturers, or PPE manufacturers, unless that money is used to directly replace turnout gear made with toxic chemicals with alternatives which have been independently studied and deemed non-toxic, once those alternatives are available; and be it further**

PFAS-free outer shells will be available in the coming years. The moisture barriers will likely remain a Teflon (PTFE) sheet until NFPA testing requirements are changed. Manufacturers are only able to pass strict NFPA requirements using PTFE as the barrier. Until we completely eliminate PFAS from our PPE we will continue to expose ourselves and our families, as well as contribute to the contamination of the cities and towns we are sworn to protect. Replacing gear is costly and many communities will be unable to fund complete replacement. The PPE industry should immediately begin replacing so called “legacy” turnout gear (manufactured prior to 2016) due to the known use of cancer-causing PFOA in its manufacture. Once PFAS is completely removed from turnout gear, manufacturers should begin work to ensure all firefighters are able to wear PPE without these toxic chemicals.

**RESOLVED, That the IAFF will issue an advisory to the fire service in order to stop the practice of sending used and/or expired PPE to communities that are unable to purchase new gear and equipment and shall work to ensure that the firefighters in those communities are provided with new and safe PPE through grants and other funding provided by the PPE industry; and be it further**

Since all turnout gear contains PFAS, it should be treated as a hazardous material when disposed of. PFAS compounds are incredibly strong and do not break down. Giving used gear to other communities means we are also sending them a contamination issue.

**RESOLVED, That the IAFF will issue an advisory based on the recommendations of independent scientists, who have no affiliation to the PPE or chemical manufacturing industry, to all members alerting them of the known link between PFAS chemicals and human illness, including cancer, and will work in conjunction with the IAFF Division of Health, Safety and Medicine advising members on proper handling procedures of their PFAS-containing gear; and be it further**

The IAFF’s apparent current stance on PFAS is that they are awaiting more scientific evidence. We believe the science is already available and has been for some time. We have just been fed the biased science for so long it is difficult to see the truth. Home Depot and Lowes have banned the sale of PFAS-containing carpets and rugs in their stores. Amazon is no longer selling food products that contain PFAS in their packaging or kitchenware. The scientific evidence of the harm to humans and the environment already exists. We believe it is time for the IAFF and



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NFPA to catch up, remove themselves from any appearance of conflict, and make the health and safety of firefighters their top priority. Independent scientists should be consulted, and with their guidance, firefighters should be made aware of the toxic chemicals in their PPE and provided with best practices when handling it in order to minimize the risk of exposure.

**RESOLVED, That the IAFF will ensure that the health and safety of its members is placed above all else, and will ensure that the IAFF Division of Health, Safety and Medicine will closely monitor the PPE industry and will utilize independent and impartial science to ensure that the fire service is provided with PPE that is not made with chemicals that are hazardous to human health and the environment**

The purpose of the IAFF is to support and protect its members. Firefighting PPE is extremely important to the health and safety of firefighters and as such the IAFF should eliminate any appearance of conflict related to accepting advertisements and sponsorships from an industry that should instead be scrutinized to ensure the lives of firefighters are not sacrificed for their profit.

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