Message

From: d Personal Email / Ex. 6
Sent: 7/1/2018 5:13:56 PM
To: zkz1@cdc.gov; fjh1@cdc.gov; pjb7@cdc.gov; kif5@cdc.gov
CC: peter_clark@shaheen.senate.gov; mark.dailey@masenate.gov; ashley_coulombe@warren.senate.gov; russell.halliday@mail.house.gov; mindi@mindiforcongress.org; bilott@taftlaw.com; president@pffm.org; president.local1009@gmail.com; jason.burns@iafflocal1314.com; rriley08@northshore.edu; geoffdaly@mkd-usa.com; Grevatt, Peter [Grevatt.Peter@epa.gov]; Dunn, Alexandra [dunn.alexandra@epa.gov]; gpeaslee@nd.edu; lpetrick@iaff.org; pmorrison@iaff.org; paul.jacques@pffm.org; rwalsh4justice@outlook.com; Personal Email / Ex. 6 carignan@anr.msu.edu; kfent@cdc.gov; acaban@med.miami.edu; sshaw@meriresearch.org; jburgess@email.arizona.edu; pgrand@hsph.harvard.edu; hdavies@kingcounty.gov; mindi@mindiforcongress.com; geoff@geoffdiehl.com; holly.davies@kingcounty.gov; Personal Email / Ex. 6 emily.sparer@mail.harvard.edu; mmaynard@NFPA.org; jpauley@nfpa.org; cdubay@nfpa.org
Subject: Dangers of firefighting foam discussed in 2001, document shows
Attachments: professor peaslee reply to pfas study question.PNG; DuPont_Shareholders_Know_More.pdf; sb 6413.pdf; cdc_19394_DS1 (1) (1).pdf; Professor Peaslee results.png; initial turnout gear pfas test results August 2017.PNG; PPE storage 1.PNG; PPE storage 2.PNG; ppe storage 3.PNG; PPE storage 4.PNG; newprojectinitiationform (1).docx

Dear NIOSH Members; Dr Breysse, Dr Redfield, Dr Howard, and Dr Fent,

I am asking your immediate action on the matter of PFAS contamination in the fire-service for career, volunteer, wildland, and military first responders.

I ask you to take the time needed to read through this very long email, to understand what has happened to the fire service, and what we have found within the coatings of turnout gear PRIOR to ever being used, in addition to the known PFAS in AFFF.

Someone must initiate an investigation into the amount of PFAS in the fire stations including dust studies, water well (rural) and water systems (municipal) for the health and protection of this nations fire service members.

I have exhausted all possible avenues and efforts thus far. No one is acting on this issue within the federal government. It is imperative you take action to ensure the fire stations have immediate tests to verify the amounts of these chemicals within the walls and water systems.

In light of the newly released PFAS Study with much lower MRLs this issue must receive priority.

A synopsis of this entire decades long issue can be heard here on this link to a statement I read at the June 25th, 2018 New England EPA PFAS Community Agenda:

https://www.facebook.com/1808869939437081/videos/2080367175620688/UzpfSTE4MDg4Njk5Mzk0MzcwODE6MjA4NTI5ODI1MTc5NDI0Nw/

All, attached please see the link to the article I spoke of in the 9 minute video regarding the statement that in 2001 a NFPA Foam representative knew the AFFF was a PBT and word never filtered down to us:

http://www.theintell.com/news/20170609/dangers-of-firefighting-foam-discussed-in-2001-document-shows#tncms-source=article-nav-prev

Sincerely,
Diane Cotter
Private Citizen, wife of firefighter with cancer, now cancer-free.
Rindge, NH

From: d [Personal Email / Ex. 6
Sent: Monday, June 12, 2017 10:54 AM
To: Pauley, James <JPauley@nfpa.org>; Dubay, Chris <cdubay@NFPA.org>
Subject: Dangers of firefighting foam discussed in 2001, document shows

Dear Jim,
We entrust our safety and health to the manufacturers that sit at the NFPA tables.
http://www.theintell.com/news/horsham-pfos/dangers-of-firefighting-foam-discussed-in-document-shows/article_d4a5bbbc-4a25-11e7-ae80-4314c84eab0c.html#tncms-source=article-nav-prev
However, when this type of alarming discussion is happening during a NFPA committee, formed for the very reason to protect our fire fighters, and then remains secret for 16 years, it erodes the hard work of all committee members and the NFPA itself. It adds to the suspicion of organizations, and manufacturers who many now regard as deceptive. I realize this was before your time Jim, however, with a NFPA liaison present, how is it word never reaches our FF's?

Jim, we need to hear from you,directly. Please inform us what measures are in place to ensure, when word of any known toxin from a substance that our firefighters wear, or that is used in their duties, is uttered, that word gets through to the front lines.

In 2001, with all these committee members sitting at a NFPA table, not one person thought it their moral or legal duty to tell FF Nation.
This is why I am calling on NFPA, in their framework, require each (M) manufacturing committee member, who uses a known toxin, or a toxin is generated in the production of the product of gear or equipment used by firefighters, that it be mandatory the toxin be reported during the committee meeting and a chain be in place that it reach all FF's in this nation.

That if there is chemical registration in another country that classifies a substance as hazardous and it is used in our turnout gear, that NFPA be notified and that information be forwarded in the chain and posted on your NFPA website.
In addition, to restore faith, each (M) manufacturing committee member should sign a oath of knowledge, that their company has or has not been made aware of a hazard or toxin and should there be a toxin/hazard, that the NFPA liaison report that directly to you during that committee revision meeting.
Also, in lieu of the recent disclosure from the manufacturers, information should also posted on your website by the trade name of the end product, such as 'Kombat, Pioneer, Brigade, etc., and the contents of the DWRs used on the material, so that each firefighter can check for themselves what the toxins are in their gear, as well as and amounts used of toxin. This is no longer an option.
We have been lied to by the manufacturers and now demand to know what was in our gear and the amounts of same.

I am no longer able to keep up with the many daily messages from the Facebook page I manage titled 'Your Turnout Gear and PFOA' from fire fighters asking if PFOA is in their gear or was in their gear from 5, 10 or even 20 years ago.

We can no longer accept the position that it is **proprietary information** from manufacturers. With 65 of 100 firefighters diagnosed with cancer, and the knowledge of these toxins are in our gear, we have the right to expect all material be labeled. Manufacturers lost the CBI privilege when they neglected to tell us about the PFCs yet continued to produce literature about fire fighters and cancer while never acknowledging past and present PFC use.

In the released minutes of the 2001 NFPA Foam meeting, multiple manufacturers sat together and not one party told the firefighters who use the end product. In the case of the PFOA on the gear, the chemical giants all knew in 2006 what was happening in Europe as they also served on the NFPA PPE committees and did not say a word. Nor did they bother to submit the form **"Statement of Problem and Substantiation for Public Input"** that I saw referenced in Structural FF PPE ROP's.)

For example, the financial statement of DuPont in 2007 references the European Union and new regulatory framework. This manufacturer should have told NFPA of the risks associated with their treated textiles in 2006 when they were informed by ECHA European Chemicals Agency:

https://s2.q4cdn.com/752917794/files/doc_financials/2007/DD_2007_10-K.pdf
Page 42, under Item 7. Part II :

In December 2006, the European Union adopted a new regulatory framework concerning the Registration, Evaluation and Authorization of Chemicals. This regulatory framework known as REACH entered into force on June 1, 2007. One of its main objectives is the protection of human health and the environment. REACH requires manufacturers and importers to gather information on the properties of their substances that meet certain volume or toxicological criteria and register the information in a central database to be maintained by a Chemical Agency in Finland. The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified. Pre-registration will occur between June 1, 2008 and November 30, 2008; complete registrations containing extensive data on the characteristics of the chemical will be required in 2010 if production usage or tonnage exceeds 1,000 metric tons per year; 2013 if it is between 100 and 1,000 metric tons per year; and 2018 if it is 100 metric tons per year or less. By June 1, 2013, the Commission will review whether substances with endocrine disruptive properties should be authorized if safer alternatives exist. By June 1, 2019, the Commission will determine whether to extend the duty to warn from substances of very high concern to those that could be dangerous or unpleasant. Management does not expect that the costs to comply with REACH will be material to its operations and consolidated financial position.

Should they not report a known SVHC they use in the gear they distribute to our firefighters, they do not deserve to be on NFPA committees deciding safety measures for our firefighters. Had the chemical giants told our firefighters of the issues they were facing in Europe back in 2006, we could have avoided much mis-information now. I receive messages daily from fire-fighters saying they were told the PFOA in the gear only happened in Europe. Or that they have been told there is nothing to worry about.
In this document, Dupont states the presence of PFOA:
http://www2.dupont.com/Media_Center/en_US/assets/downloads/pfoa/WhatisPFOA.pdf
• PFOA may be found at very low trace levels in some fluorotelomers. Fluorotelomer derivatives are a family of compounds used as ingredients in making firefighting foams and coatings because of their unique properties. They are also intermediates, or building blocks, used to manufacture stain-, oil- and water-resistant additives for some textiles, paper, coatings and other surfaces.
Yet here, in DuPont's May 2017 statement on PFOA there is no mention of the unintended by products:
http://www.dupont.com/corporate-functions/our-company/insights/articles/position-statements/articles/pfoa.html

Also confusing is the the conflicting information released over the last few years by the IAFF.
In 2011 the IAFF PFC Fact Sheet under Toxic Exposure (**see attached**), IAFF stated " ***It is possible fire fighters are exposed to PFCs through fire fighting foam and to PFCs used to make fire fighting gear water and stain resistant.***"

As well as the 2015 IAFF Publication; Fire Fighters and the Evaluation of Cancer Causation,
Pages 53 - 62: http://services.prod.iaff.org/ContentFile/Get/10183 (**see attached**)

Perfluorinated Alkyl Substances (PFAS) Stain-resistant coating on upholstery, carpets, performance clothing, non-stick coatings on cookware, food wrapping, surfactants in firefighting foams Endocrine disruptors, liver, heart disease, cancer (PFOA)

and:
Teflon Chemical Might Be Unsafe at Any Level New study shows EPA drinking water standards 100X too high (Grandjean and Clapp 2015) PFOA (C8) Levels in Fire Fighters vs General Population

These messages contrast the IAFFs 2017 PFOA and Turnout Gear Statement that summaries the word of the manufacturers is sufficient, without the actual numbers of PFOA amounts used in the MSDS of the chemical coatings:

Conclusions

Exposure to PFOA is very common in US and Canadian populations due to its extensive past use in a wide range of products from carpets to stain and water resistant fabrics and upholstery to nonstick cookware. Importantly, PFOA use has been almost completely phased out in the US under the PFOA Stewardship Program and in Canada through recent regulation. Fire fighters may have additional PFOA exposure sources such as older Class B fire fighting foams. If PFOA is a combustion product of PFOA-containing consumer products made prior to phasing out use of this chemical, fire fighters

will be exposed in fire suppression activities. However, the data are too limited at present to determine this. PFOA is unlikely to be a component in recently US manufactured turnout gear. However, if PFOA is a combustion product, it may be present as a contaminant on turnout gear. PFOA may also be present as a manufactured component of legacy turnout gear, or in turnout gear manufactured in other juridictions. The exposure contribution from any such PFOA content is likely to be minimal since volatilization from the manufactured product would be required.

Recommendations *At this time, IAFF does not recommend that legacy turnout gear be replaced outside of its lifecycle. Fire fighters wishing to minimize PFOA exposure should continue to wear their PPE, including SCBA, and regularly decontaminate their turnout gear. IAFF will continue to monitor developments and update this fact sheet should new information become available.*

Jim, as you are well aware past history in the fire service indicates many organizations working together, to support safety measures when brought to the attention of chiefs, NIOSH, NFPA, IAFF, etc. As was the case with Diesel Exhaust:

Diesel exhaust exposure is addressed by the National Fire Protection Agency (NFPA) in its 1500 standard. The standard states, "The fire department shall prevent exposure to firefighters and contamination of living and sleeping areas to exhaust." Many different products are available to remove diesel exhaust and minimize exposure to firefighters, including in-station exhaust systems, ventilation systems and apparatus-mounted removal systems. The above information can be used to justify the cost of these systems to help decrease the risk of cancer and improve the overall health of firefighters. http://www.firehouse.com/.../cancer-and-the-fire-service
see also: https://firefightercancersupport.org/wp-content/uploads/2013/06/diesel_emissions_in-fire_stations.pdf

As well as the IAFFs strong movement on Flame Retardants: Resolution 34 by the IAFF
(**attached**) http://iaffconvention2014.org/resolution-no-34/

84 RESOLVED, That the position of the IAFF will
85 continue to support affiliates at the local, state and
86 provincial level in any attempt to ban flame
87 retardants, industrial chemicals and other known
88 toxins through legislation, regulation or standard
89 changes; and be it further
90 RESOLVED, That the IAFF work to ensure that
91 the use of carcinogenic flame retardants and other
92 toxic chemicals are eliminated and safer alternatives
93 or methods are pursued, such as California's standard
94 TB-117-2013, including the development of non-
95 toxic standards through the National Fire Protection
96 Association, International Code Council,
97 Underwriters Laboratories and similar testing
98 Organizations; and be it further
100 RESOLVED, That the IAFF gather additional
101 scientific research and studies regarding fire fighter
102 exposure to carcinogens, toxic flame retardants and
103 other toxic chemicals, as well as continue to educate,
104 train and heighten the awareness of its members to
105 the dangers of these toxic chemicals and seek
106 preventative measures to lessen fire fighters risk of
107 developing cancer

Fire fighters need to see the same combined efforts again of these organizations working together to ensure that each fire fighter that dons the gear daily, is not wondering what they are wearing. They deserve nothing less.

In December of 2016, the International Agency for Research on Cancer, shows PFOA as a Group 2B toxin.
It is no longer good enough to let manufacturers dictate what they will and won't share about the garments they provide. Not in light of the released minutes.

IARC Volume 110 / Perfluorooctanoic Acid, classifies PFOA (see IARC PFOA attached):
6.3 Overall evaluation Perfluorooctanoic acid (PFOA) is possibly carcinogenic to humans (Group 2B).
In the case of PFOA, we are not given the opportunity to see amounts as it is called 'proprietary information', as was noted in the notes and comments of the **ECHA Annex XV Early Comments, where textile manufacturers stated their amouts were 'proprietary' over and over.**

Our firefighters should have knowledge of what they are donning. They do not provide substance amounts, and leave it for firefighters to wonder if they will be the next to be diagnosed. In light of this weeks release of the NFPA 11 2001 minutes, the manufacturers have dug themselves quite a hole. I I question if a chemical giant would put their child in turnout gear for decades at a time knowing what the amounts of PFCs were used (past or present).

While we are not discussing PFOA here in PPE in the US, there is plenty of discussion in Europe.
In February 2015, Delegates attending the highly successful **PPE & Duty of Care Forum** (see attached) held in Birmingham where manufacturers and health officials discussed PFOA and turnout gear.

Highlights:

https://www.firerescueforum.com/content

PPE & Duty of Care Forum 2016

Personal protective equipment (PPE) is the last line of defence for firefighters yet few Fire & Rescue Services fully understand how the latest generation of protective clothing works or how it should be managed effectively in the light of imminent EU-wide chemical restrictions. At this one-day conference, you can.

What will it cover?

* Disposal of firefighting clothing that contains restricted chemicals
* Maintenance of clothing containing restricted chemicals
* Legal and financial obligations regarding current contracts
* Legal and financial obligations of service contracts
* Managing a potential transition to non-PFOA PPE

* **Dr Roger Klein of Cambridge (UK) and Christian Regenhard Center for Emergency Response Studies, John Jay College of Criminal Justice, CUNY, New York** *provided an insightful presentation on the history and latest developments regarding PPE and fluorochemicals in the fire service.*
Around three quarters of all global fluorotelomer production is used for treating textiles and paper in order to give water and oil repellent coatings. However, concern over the potential environmental impact of fluorochemicals has grown since the announcement in May 2000 that 3M would be phasing out PFOS-based production involving Lightwater and ATC foams as well as Scotchgard protective coatings.

Modern emergency services' PPE makes extensive use of fluorotelomer-treated fabrics for protection against both polar, i.e., water and alcohols, and non-polar, i.e., hydrocarbons, oils and greases, contaminants. The commonly used fluorotelomer acrylate and methacrylate polymers have been characterised traditionally by predominantly C8, C10, and C12 chain lengths, in order to get the required performance and durability of finish
However, increasing concern by regulatory authorities over the environmental and human health impact of releasing PFOA -- and longer chain perfluorocarboxylic acids (PFCAs) --to the environment based on unacceptable PBT (persistent, bio-accumulative, toxic) profiling has led first to the voluntary PFOA Stewardship Program 2010/2015 by the US Environment Protection Agency and, more recently, to the European Chemical Agency (ECHA) PFOA Restriction Proposal initiated by the German and Norwegian governments.

The ECHA PFOA Restriction Proposal sets out to limit free PFOA to 25 parts per billion and PFOA precursors to 1,000ppb (or 1ppm) in all manufactured articles. This is a modification to the original overly strict limit of 2ppb for both free PFOA and PFOA precursors which followed an industry-wide consultation.

In order to give industry time to develop alternative technologies, however, there are specific time-limited derogations for firefighting foam of 1ppm for both PFOA and PFOA precursors, and for protective clothing used by the emergency services, police and military.

The situation is particularly acute for all-weather clothing and hazardous materials PPE since these applications have relied on using fluorotelomer polymers especially rich in C8, C10 and C12 fluorotelomer chains. All C8 fluorotelomer derivatives are known to breakdown to PFOA in the environment. By analogy, C10 and C12 fluorotelomers will yield perfluoro-n-decanoic acid and perfluorododecanoic acid, both of which are more toxic and bioaccumulative than PFOA. All PFCAs are highly environmentally persistent.

Since the introduction of the PFOA Stewardship Program industry has switched to fluorotelomer derivatives using so-called pure C6 compounds. Unfortunately even the very best of these are still contaminated with significant levels of C8 derivatives (and possibly C10, C12…) in terms of achieving the very low levels of PFOA precursors required by the ECHA Restriction Proposal, although free PFOA levels have been drastically reduced. Moreover, switching to pure C6 fluorotelomer derivatives has highlighted problems of achieving functional efficiency, especially in terms of the required levels of oil and water repellency, durability, and maintenance costs.

The PPE industry is thus left with the pressing problem of developing an alternative to fluorochemical treatment that retains functionality and durability.

*** Product development engineer Pavla Krizman Lavric at Tencate Protective Fabrics** *concentrated on the importance of the outer shell as the first line of defence as well as the impact that the transition in chemistry from C8 chemicals to C6 chemicals will have on the protection level given by the gear when it comes to protection against splashes of oil, water and chemicals. These substances are found in AFFF surfactants in firefighting foams, wetting agents as well as textile finishes on the outer shell of firefighters' protective clothing.*

This shell not only provides resistance to mechanical effects such as abrasion, rips, cuts and tears but also provides water, oil and chemical protection via a chemical film on the fibres' surface. This film prevents droplets from penetrating the fabric whilst allowing moisture vapour and air to transfer through.

Fluorocarbon finishes are currently used because the alternatives do not provide the water and oil repellence required by EN469, the European standard for firefighting protective clothing. These finishes are durable but do not last the lifetime of the garment. In fact, their performance reduces with every wash. The only way to reactivate their properties is to treat the garment with heat and eventually the finish needs to be reapplied.

Krizman outlined the complexity and the many challenges presented by current spray and liquid chemical resistance testing required to meet EN469. A whole load of factors influences the results, ranging from the pre-test wash treatment, the tightness of the weave of the fabric, the smoothness of the fabric and the type of fibres being tested.

Industry is currently working to meet these stringent tests using C6 chemicals rather than C8 chemicals, but research so far has shown that the only way of reaching similar levels of performance without C8 is to use more concentrated chemicals or in larger volumes, which in the future could create a new environmental issue. 'The performance goes down as the chain size of fluorocarbon goes down from C8 to C6.'

While the expectations are that these challenges will be met, many misconceptions remain. First is that the life of the fluorocarbon finish determines the life of PPE clothing. This is not the case. Proper care and maintenance and timely reapplication will result in optimal finish performance during the lifetime of a garment. The only way to ensure the performance of a garment is to have a good track-and-trace system in place, by working with laundries with the experience of treating these kinds of garments. 'Don't rely only on what you think you know, and be aware that fabric testing in a laboratory does not reflect real life,' concluded Krizman.

*** Bernhard Kiehl of WL Gore** *drilled down on the role of durable water-repellent (DWR) finishes and their role in firefighting as well as the challenges being faced with the phasing out of C8 chemicals.*

Kiehl demonstrated what happens when the DWR fails on the outer textile layer – it gets wet leading to thermal insulation loss and to discomfort for the wearer. If the garment is a pair of gloves, for example, hands get cold and lose tactility, making it difficult for the firefighter to perform simple tasks.

Commenting on the phasing out of PFOA, Kiehl highlighted that even though traces of PFOA had been found in apparel it had never been considered an immediate risk for end users: 'There are several agencies around the world looking into that and because the trace amount was so small and dermal intake isn't really a major route, studies have concluded that wearing the apparel or footwear is not a risk to the consumer.'

Jim, the statement from Kiehl regarding the 'trace amounts' as no PPE has been tested for PFOA past or present is untrue. Past amounts of DWRs on turnout gear have not been shared with anyone. For a statement like this to be made I wish to see the documents that support the amounts being called minute. There are tests that have shown the amounts on raincoats etc. but to equate the heavy duty repellents used on turnout gear to these amounts is a dangerous deception in my opinion.

The 2017 FIERO Symposium did not mention PFOA. Another missed opportunity. The 2019 schedule is not yet available, Hopefully discussion of PFOA will be listed : http://fireppesymposium.com/schedule.php

We also have documents confirming that fire fighters have higher numbers of pfoa in their serum:(see attachment): Community Exposure to Perfluorooctanoate: Relationships Between Serum Concentrations and Exposure Sources

In the general US population, median serum PFOA values are around 4 to 5 ng/mL, occasional values are above 20 ng/mL (4,5,9) with no significant gender differences.
Among those with potential occupational exposure, the highest median values were observed for firefighters at 453 ng/mL

We have spent years trusting the manufacturers, but the 2001 NFPA 11 minutes have changed that. With the knowledge of how the manufacturers operate in a professoinal setting such as NFPA which is intended to keep the health and safety of FF nation as its priority, and the deception practiced by omission, why would any man or woman don turnout gear without the labels showing exactly what is in it?

In 1999, this 3M document shows Protective Clothing as a 'end use' under their Apparel and Leather Fluorochemical Use, Distribution, and Release Overview Major Markets and End Uses See attachment: 3M Fluorochemical Use and Distribution...

In light of the dermal absorption routes, inhalation route, oral route, the fact that our fire fighters were never made aware of this toxin. Where it degraded in their stations where they work, eat, and sleep. Urgent attention should be given to this matter to test their fire-stations, and each fire fighter at the cost of the manufacturers. The same attention should be given to this matter as was done for Diesel Exhaust, including the NIOSH testing and the Flame Retardants.

Also concerning is how much PFOA is in the serum of fire fighters from years of exposure in their stations where they work, eat, and sleep from the PFOA that has degraded from the gear and is deposited in the dust and surfaces of the stations. Please see page 125 of the ECHA BACKGROUND DOUCMENT (attached) regarding BACK CALCULATING:

The back-calculated intakes from serum concentrations for occupationally exposed workers were in the range 0.8 to 13189 ng/kg bw/day with an overall mean intake of 298 ng/kg bw/day

Jim, the suspicion now raised by the recent release of comments made by manufacturers will only be overcome with full disclosure and knowledge. Below is a excerpt from a shareholders manual regarding the 2005 discussion of PFOA:
E.I. du Pont de Nemours and the GrowingFinancial Challenges of PFOA
https://www.healthandenvironment.org/docs/xaruploads/DuPont_Shareholders_Know_More.pdf (attached)

2005 - The Shareholder's Right To Know More Potential Impact on Product Lines

In the event that PFOA is restricted through regulation, or in the event that markets migrate away from the use of products made with PFOA, or that break down into PFOA, the impact on DuPont could be substantial. Analysts at JP Morgan have estimated that DuPont's PFOA-related product lines, fluoropolymers and telomers products, contributed about $1.23 billion to 2003 sales and $100 million to profit. DuPont's earnings in 2003 were $973 million on revenue of $27 billion. (page 23)

This report highlights the billion dollar buisiness of protective gear each year in the US alone: https://www.bccresearch.com/market-research/advanced-materials/advanced-protective-gear-armor-report-avm021h.html
The U.S. market for advanced protective gear and armor has reached $4.5 billion and $4.7 billion in 2013 and 2014, respectively. **This market is expected to reach at compound annual growth rate (CAGR) of 4.4% to nearly $5.9 billion in 2019.**

In light of Chris Hanauska's statement during the NFPA 2001Foam Committee;
"Persistant, Bioaccumulative, Toxic. Exhibition of one of these traits is bad, two makes

its use questionable, and when all three are present, it is a death warrant. PFOS has all three.

So does PFOA Since 2012. Yet still no formal word to US Firefighters.

https://enveurope.springeropen.com/articles/10.1186/2190-4715-24-16

Conclusion

Due to its intrinsic properties, PFOA fulfills the REACH PBT-criteria. The next regulatory step will be the identification of PFOA and its ammonium salt (APFO) as SVHC according to REACH and the addition to the REACH Candidate List. As a second step, a restriction proposal will be prepared to include both substances and precursors into REACH Annex XVII.

Lastly Jim, the elephant in the room. All of these manufacturers are purchasing advertising in our fire related publications, magazines, online, at trade shows, supporting cancer studies, fire fighter cancer organizations, making videos, etc. The list is endless. It is suspicious when these manufacturers lecture our firefighters about washing their gear and their bodies and not storing their gear in UV, when the reality now shows they have known about PFOA and PFOS for decades. It appears that they are able to do what they wish as their pockets are so deep.

Jim, thank you for the time you have spent reading this letter today. I'm sure it wasn't easy to do at times, but please keep pushing forward in this matter as I'm certain you have every intention to. I will be mailing a letter to each of the parties listed below to secure their awareness and posting same to the page I manage.

Sincerely,
Diane Cotter

cc.

-
Congressman James McGovern (MA)
Congressman Brian Fitzpatrick
State Rep Todd Stephens (PA)
State Rep office of Ken Donnelly (MA)
State Rep Bob Casey (PA)
Russell Halliday, Legislative Assistant/McGovern
David Swanson, General Counsel/Ken Donnelly

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Christopher Dubay, VP/Chief Engineer NFPA

-

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John Howard, MD, Director NIOSH
Frank Hearl, PE, Chief of Staff NIOSH

-
Harold Allen Schaitberger, General President IAFF
Patrick Morrison, IAFF Assistant to the General President
Larry Petrick, IAFF IAFF Deputy Director Occupational Health and Safety

-----Original Message-----
From: d Personal Email / Ex. 6
To: jpauley <jpauley@nfpa.org>; cdubay <cdubay@nfpa.org>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindi@mindiforcongress.org>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; rriley08 <rriley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby Personal Email / Ex. 6; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindi@mindiforcongress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter Personal Email / Ex. 6 emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>
Sent: Thu, Jun 28, 2018 1:08 pm
Subject: NFPA notification of PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Good afternoon Jim and Chris,

This past week I attended the New England EPA PFAS Community Engagement :

https://www.epa.gov/newsreleases/epa-hold-new-england-community-engagement-pfas

This EPA agenda came about due to the PFAS contamination of waterways contaminated by AFFF, and, on the heels of the newly released ATSDR PFAS study. https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=1117&tid=237

I was able to give a statement on PFAS in the fire service (below).

After I was approached by Senator Shaheen's aide, Peter Clark, whom I spoke with this morning.

Yesterday I received two replies from both Peter Grevatt Dir, Office of Water and Alexandria Dunn RA of EPA District 1 New England.
They were unaware of the amounts of chemicals used in the coatings of our gear.

They have the same concerns as Professor Peaslee regarding the degradation and water run off from the chemical coatings in
turnout gear during wash cycles and end of service.(see attached Professor Peaslee's reply..)

In March, I submitted a New Projects Initiation to NFPA (attached NEW PROJECT INITIATION 3.18) seeking to identify and label the chemical additives and amounts used in turnout gear.

The recent ATSDR PFAS Report has now recommended PFOA MRL at 11ppt. The fraction of the potential of PFOA that came from new, never worn turnout gear was 157 ppb PFOA. That is 14,000 times higher in just the fraction of the potential that is in the gear.

Although the manufacturers no longer use PFOA, it does occur as a by product of production. As well, the new 'short chain'
chemistry aka Gen-X has yet to be proven safe.

I did receive a response from NFPA via phone call and email in regards to this initiation request and was given the guidelines on how to the to comment on the upcoming standards cycle.

Respectfully Jim and Chris in light of the newly released PFAS STUDY, **I wish to resubmit the NEW PROJECT INITIATION (attached) to you both today here publicly,** and ask again that this matter be 'fast tracked' to form a task force surrounding this issue.

h.	**Provide an estimate on the amount of time needed to develop the new project/document**

	This issue is IDLH. PFOA and some precursors are PBT. NFPA must act to 'fast track' this project. We have no knowledge of the chemicals and amounts we are wearing. We have no save handling methods for our new PPE and station wear. Without knowing chemicals and amounts we may be exposing ourselves unnecessarily to more carcinogens or potential carcinogens.

Sincerely,
Diane Cotter

I also wish to state publicly, to all reading this email, THIS ISSUE NO LONGER BELONGS IN THE HANDS OF A RETIRED HOUSEWIFE.

-----Original Message-----
From: d Personal Email / Ex. 6
To: peter_clark <peter_clark@shaheen.senate.gov>
Cc: mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; bilott <bilott@taftlaw.com>
Sent: Thu, Jun 28, 2018 10:50 am
Subject: Fwd: Your Turnout Gear and PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Peter, than you for our conversation this morning.
We are desperate for help on this issue.

As mentioned, we need blood testing and dust studies in our stations desperately. We need to know what is in the new coatings of our turnout gear. We have NO idea what is being used other than it is of the PFAS GenX family.

I have cc'd Russell Halliday from Congressman McGovern's office, Environmental Attorney Robert Bilott , Ashley Coulombe of Senator Warren's office, as well as Mark Dailey from Madam President Senator Harriet Chandler's office.

We have met with Congressman McGovern, Ashley Coulombe, and Mark Dailey in person. I did see Senator Warren in person at the Holen MA town hall in May. I was able to hand her a 160 page document on this issue regarding the deceptions, omissions, conflict of interest of the manufacturers that immerse themselves in our fire fighter cancer research and studies and say nothing to the fire service about PFOA/PFOS.

I have submitted the 160 page document to the DOJ at least 4 times now since February. No response. Except they did confirm they have it. But no one has called to ask any questions.

Please help. The manufactures have been able to line their pockets off the backs of fire fighters as there are no regulations on the chemicals. No regulations on how much they can use in our gear. They could be pumping much more than is necessary to inflate their stock price.

Thank you.

Diane Cotter

-----Original Message-----
From: d < Personal Email / Ex. 6
To: grevatt.peter <grevatt.peter@epa.gov>; Dunn.alexandra <Dunn.alexandra@Epa.gov>; geoffdaly <geoffdaly@mkd-usa.com>
Cc: gpeaslee <gpeaslee@nd.edu>; mindi <mindi@mindiforcongress.com>
Sent: Wed, Jun 27, 2018 10:56 am
Subject: Your Turnout Gear and PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Good Morning all,

Dr Grevatt, Ms Dunn, thank you for hearing my statement Monday evening at the EPA PFAS Community Engagement.

Please understand we have been trying for well over one year to bring immediate attention to this issue for the fire service. I'm sure it may have been a shock to see how much PFAS was in our turnout gear.

I wanted to bring Professor Peaslee into the conversation please, as he first tested the gear last year for PFAS content, then he tested for PFOA content. He has the same concerns about the water as you folks do. (see Professor Peaslee's reply...attachment)

My grave concern is for what is degrading in the fire stations. But if we can address that while you folks look at the water issue then by all means. (See attachments PPE storage 1-4 for examples)

Geoff Daly, your input to Paul and I was invaluable and I'd like you to meet Professor Graham Peaslee.

Mindi has been working since last August to shed light on this issue, speaking at fire stations and writing articles to bring insight to the issue that the turnout gear coatings need nation wide recognition.

But truly, we are desperate for CDC to get on board with this issue. The staggering amounts of PFOA/PFNA that collect over and over in the area where a FF hangs their gear is keeping me up at night.

Please see below for supporting links to statements I made Monday evening.

Thank you all.
Diane Cotter

https://www.facebook.com/1808869939437081/videos/2080367175620688/UzpfSTUwNzc0MDA5MToxMDE2MDU5MjUxNDcwMDA5Mg/

Transcript from the first in the nation New England EPA PFAS Summit in Exeter, NH. 6.25.18

Thank you Organizers and EPA Panel Members for allowing me this opportunity to speak.

My name is diane cotter, I am here with my husband, Lt Paul Cotter, retired, 28 year veteran, Worcester Fire Department . And cancer survivor.

My community is the 1.3 million firefighters in this nation who have been completely overlooked in this PFAS catastrophe.

America's firefighters have been on the front line of PFAS exposure since 1983 using it in AFFF, being sprayed in our faces, wading in it, having turnout gear soaked in it, and exposing our families to it after bringing gear home.

We were not aware how toxic this substance was. This turnout gear I have is from 2004, it is new and never worn or 'contaminated' as the fire service would say. Jan of 2018 our grassroots effort acquired Professor of Physics Graham Peaselee, of Notre Dame Univ to test it for PFAS content. Just the 'fraction of the potential' that is in this gear tested at 157 ppb PFOA and 257 PFNA.

THAT IS 14, 000 times the newly set recommended limit of PFOA.

Turnout gear has been impregnated with PFOA since 1999 (at least) to meet NFPA water repellent STANDARDS. We were never made aware. We do not know how much. Only our gear manufacturers have that information. We sweat in this gear, our body temperature rises and our skin absorbs these toxins. We start our careers in our child bearing years. PFOA and PFOS are designated by California Prop65 as causing 'reproductive cancers'.

In 2006 the European Chemical Agency (ECHA) notified gear manufacturesr they would be restricting PFOA in 'textiles'. One of those textiles is firefighter PPE. By 2012 PFOA was designated a Substance of Very High Concern there. Gear manufacturers were made aware of the decision to restrict the amount of PFOA in turnout gear to 25ppb and 'precursors' to 1ppm.

http://www.hemmingfire.com/news/fullstory.php/aid/2601/Six-year_PFOA_reprieve_for_firefighters__protective_clothing.html

To date they have not advised the US of this issue. While the manufacturers are discussing and teaching about the issue in Europe, they have not mentioned it here. https://www.firerescueforum.com/content

They minimized the issue when it came up recently in a firefighting trade magazine published by 'Station Pride' titled 'The Real Cancer in Your Gear'. https://station-pride.com/2017/03/28/the-real-cancer-in-your-gear/

We are in a particularly high risk exposure setting as our gear has been degrading in our fire stations where we work, eat, sleep, since 1999.

The coating degrades in UV lighting, in many stations our gear is stored in open lighting next to apparatus in bays. Paul's station had 80 sets of gear rotating through his station in one week. The gear is designed to be used for 10 years. Over 20 years we have had thousands of sets releasing particles of PFOA into our stations.

The new short chain coatings are also a concern. NH State Rep and Enviro Scientist Mindi Messmer wrote an article on this issue titled Firefighter Cancer Quadfecta.

https://www.firefighternation.com/articles/2018/06/firefighter-cancer-quadfecta.html ;

From trade magazine FireFighter Nation:

The replacements, termed "short chain PFCs" were sported as better for the environment and public health. However, scientific studies conducted in laboratory animals indicate that the short chain replacements could be more toxic to humans since they accumulate longer in organs than the long chain legacy compounds. This may be the cause of cancer incidence in younger firefighters.
I have been advocating for a national health study specifically focused on firefighters to assess the health outcomes because they are highly exposed. It is often difficult to tie causation with cancer or other chronic diseases. Focusing on the highly exposed populations is more likely to carefully evaluate possible negative health outcomes for exposures to PFCs. This should include, at a minimum, thorough cancer screening and annual serum PFC monitoring of firefighters to provide longitudinal data to assess health outcomes (see Table 2). It is not enough to have a cancer registry, we have to prevent cancer by taking proactive steps to identify and prevent exposures in while firefighting, in fire stations, and in the turnout gear before they make firefighters sick.

To date there has not been a PFAS dust study done in our stations. Yet, biomonitoring has shown firefighters PFOA serum tested in ranges from 243 ng/mL to 423 ng/mL from a 'yet unknown source'. The 'DuPont Water Works' plant workers were considered high at 32 ng/mL.

Adding to this concern is the October 2, 2017 NH DES letter to every fire station in NH that of 6 of 7 New Hampshire fire stations water wells tested at 'elevated' levels of PFAS.

https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H20Sample.pdf

In 1992 DuPont's own scientist learned their PFOA casuesd testicular cancer. Testicular cancer is the number one cancer in the fire service. . DuPont is a manufacturer of our gear. They have yet to tell us about this. They are immersed in every aspect of fire fighter cancer research, and teaching prevention methods. In 2006 they notified shareholders that 'any attempt to regulate PFOA would impact their bottom line'. They never shared that with us either. In 2005 the United Steelworkers Union advised Gore also a turnout gear manufacturer, and DuPont, to notify the end user of the harmful effects of PFOA. Neither did.
See attached (DuPont Shareholders.... page 29)

https://www.cleanlink.com/news/article/Steelworkers-Union-Warn-of-Harm-from-Teflon-Related-Chemical--3717

On September 5, 2017, Environmental Attorney Robert Bilott, C8 Science panel's Dr Paul A Brooks, and Fire Chief Jeff Hermes demanded testing and studies of the EPA, CDC/ATSDR, and US Attorney General on behalf of all first responders US due to their exposure from foam and gear.

https://www.documentcloud.org/documents/3988104-Firefighter-Letter.html

With NO regulations for these chemicals, manufacturers are under NO obligation to tell us what we are wearing, or spraying. They defiantly refuse to give us that information citing 'proprietary information'. They have even lobbied for and win the right to NOT put warning labels in our turnout gear. See here for the 'Liability Bill'; https://www.femsa.org/whois_femsa/history/ ;

Our manufacturers sit on NFPA committees deciding safety standards of gear, from the balance of a helmet to the width of reflective tape. but are under no obligation to advise of the chemicals in our gear. They never did. Not once.

The newly released PFAS study mentions FF occupational and high risk of exposure numerous times.

Yet the fire service has been omitted from the multi million dollar PFAS Study award.

We respectfully ask Senator Shaheen and Massachusetts Senator Elizabeth Warren to immediately add this nations fire fighters to the PFAS Registry along with the already chosen active military and veterans.

The EPA and NIOSH have been kicking this issue of occupational exposure and setting limits down the road for over 40 years. Last week I shared a 1977 NIOSH report titled " Criteria for a recommended standard - occupational exposure to DECOMPOSITION PRODUCTS of FLUOROCARBON POLYMERS" . Here in 2018 we are seeing the same thing.

(see attached cdc_19394_DS1)

Under both Democratic and Republican leadership the EPA and CDC have been a catastrophic failure to the fire service. Hasn't anyone wondered about the firefighter they see covered head to toe in A-tripleF?

After 40 yeras of undecisivness, the fire service took matters into its own hands. Washington State Council of Fire Fighters and Toxic Free Futer passed SB 6413 (attached) limiting the use PFAS in AFFF and requiring labels be added advising the wearer of PFAS exposure in turnout gear.

The Professional Fire Fighters of Massacusetts and Toxics Action Center are both on board with this.

Last week the PFFM has voted unanimously to make PFAS legislation a priority.

The fire service can do this state to state to protect ourselves and fellow citizens.

And we WILL get it done.

But isn't that your job?

thank you.