

Australian Senate Legal and  
Constitutional Affairs Committee

# Inquiry into the Use of Smoke Alarms to Prevent Smoke and Fire Related Deaths

submission by:



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In accordance with standard procedure, the WFSF will provide the committee with supplemental information to this report before the hearing date.	

 <b>Photoelectric Smoke Alarms</b> Safer For Fire Fighters™			
<b>SAVE MORE LIVES</b> Page		Ionisation	Photoelectric
Failure to Activate	<a href="#">10</a>	Significant	Insignificant
False Alarms and Disconnections	<a href="#">10</a>	Significant	Insignificant
Safer for Fire Fighters™	<a href="#">10</a>	No	Yes
 Disposal	<a href="#">10</a>	Radioactive	Not Radioactive
Price	<a href="#">11</a>	Affordable	Affordable
Located		Most Homes	Commercial Buildings
© Copyright World Fire Safety Foundation - Nov 2014			

## World Fire Safety Foundation Letter to Senate Committee

31 August 2015

The Senate Legal and Constitutional Affairs References Committee  
C/- Ms. Sophie Dunstone, Committee Secretary  
PO Box 6100, Parliament House, Canberra ACT 2600, AUSTRALIA  
31/08/15: Submitted: [Senate Inquiry website](#) | Emailed: [legcon.sen@aph.gov.au](mailto:legcon.sen@aph.gov.au)



### Australian Senate Inquiry into the Use of Smoke Alarms to Prevent Smoke and Fire Related Deaths

Dear Ms Dunstone & Committee Members

Thank you for the email of 07 July 2015 inviting the World Fire Safety Foundation to make a submission to the Australian Senate's Smoke Alarm Inquiry.

The World Fire Safety Foundation has been campaigning on this issue globally since March 2000. The Foundation is self-funded. We do not solicit or accept donations.

The 'Contents' on page two show that [the terms of reference outlined on your website](#) have been addressed in section (C) of this report. However, for clarity, I have taken the liberty of adding two other sections: (A) 'Chronological Background Australia'; and (B) 'Life-Safety & Litigation Concerns'. A supplemental report, section (D), will be submitted in due course.

These sections will apprise you of critical background information that underpins the Inquiry which was inspired by Senator Glen Lazarus. Chris Gulaptis MP's ([page 6](#)) and the honourable Senator Lazarus's ([page 9](#)) Parliamentary speeches give excellent insight with life-safety and pending litigation problems with the ionisation type of smoke alarms currently installed in most Australian homes.

Thank you once again for the opportunity to submit this report.

Sincerely

Adrian Butler  
**World Fire Safety Foundation**  
*Chairman, Co-Founder, Former Fire Fighter*

Web: [www.theWFSF.org](http://www.theWFSF.org) | [www.SmokeAlarmWarning.org](http://www.SmokeAlarmWarning.org)  
Facebook: [www.facebook.com/thewfsf](https://www.facebook.com/thewfsf) | Scribd: [www.scribd.com/thewfsf](https://www.scribd.com/thewfsf)

"...ionisation smoke alarms should should not be available for purchase or installation in Australia. They should be prohibited."



**Senator Glen Lazarus**

Smoke Alarms' Senate Speech  
NSW, Australia | Feb 2015

([page 9](#))

Ionisation smoke alarms  
"should be replaced"



**Queensland Fire and Emergency Services Smoke Alarm Brochure**

([page 12](#))

"FRNSW does not support the fitting and installation of ionisation alarms. We only recommend photoelectric alarms."



**Greg Mullins AFSM**

Commissioner FRNSW  
President AFAC  
NSW, Australia | 21 Oct 2014

## Overview



David Isaac, one of Australia's leading fire safety experts and Standards Australia Smoke Alarm Committee Member FP002, warning the public have been misled about ionisation smoke alarms in June 2006:  
[www.TheWFSF.org/sa](http://www.TheWFSF.org/sa)

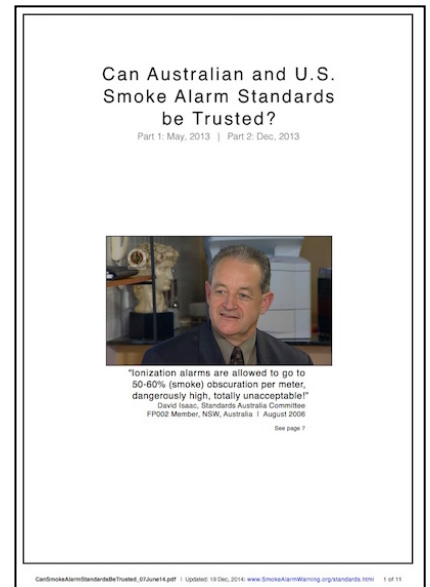
There are two types of smoke alarms - **Ionisation** which are in most homes and **Photoelectric** which are in most commercial buildings.

Australian Government (CSIRO) test data proves the ionisation type of smoke alarm in most Australian homes is unsafe. Australian & New Zealand Fire Brigades strongly recommend the use of photoelectric smoke alarms. This begs two important questions:

- 1) Is there anything wrong with ionisation smoke alarms? ([page 6](#))
- 2) If so, do authorities have a Duty of Care to warn the public?

### Flawed Standards

David Isaac is one of Australia's leading fire safety experts and a member of the committee that oversees Australia's Smoke Alarm Standard. In a recent 60 Minutes investigation he revealed that scientific test data held by the Australian Government (the CSIRO) proves the U.S. and Australian Smoke Alarm Standards are flawed and ionisation alarms have life-threatening defects.




**Flawed Smoke Alarm Standards**  
The Key to Solving the 40 Year  
Ionisation Smoke Alarm  
Problem Globally


[SmokeAlarmWarning.org/reports.html](http://SmokeAlarmWarning.org/reports.html)









## Channel 9 - A Current Affair: 'SMOKE ALARMS' Reports AFAC: Position on Smoke Alarms in Residential Accommodation






06 October 2004




Ray Martin - 'A Current Affair'

'A Current Affair' (ACA) report airs across Australia warning about alleged life-threatening defects with the ionisation alarms in most Australian homes.




06 June 2006



Tracy Grimshaw - 'A Current Affair'

AFAC report confirms alleged defects with ionisation alarms from 2004. AFAC's report warns ionisation alarms may not operate in time for occupants to escape in the early, smouldering stage of fires.




01 June 2006

### AFAC's Official Position On Smoke Alarms

The Australasian Fire & Emergency Service Authorities Council (AFAC - formerly the Australasian Fire Authorities Council) is the peak representative body for all Australian and New Zealand Fire Brigades.

After A Current Affair's October 2004 report, AFAC commissioned Victoria University to undertake global smoke alarm research which resulted in their official position.

AFAC's official 'Position on Smoke Alarms in Residential Accommodation' of 01 June 2006 states:



[www.TheWFSF.org/afac](http://www.TheWFSF.org/afac)

#### 1. Ionisation Alarms - The Problem

"Ionisation smoke alarms may not operate in time to alert occupants early enough to escape from smouldering fires."

Page 3, Clause 3 'Type', Note 3c

#### 2. Photoelectric Alarms - The Solution

"That all residential accommodation be fitted with photoelectric smoke alarms."

Page 3, Clause 3 'Type', Para 1

#### 3. Performance - Ionisation vs Photoelectric

"For both flaming and smouldering fires, photoelectric smoke alarms are likely to alert occupants in time to safely escape."

Page 3, Clause 3 'Type', Note 3

#### 4. Combination Ionisation / Photoelectric Alarms

"Smoke alarms fitted with dual photo-electric / ionisation detectors are available. Householders may choose to install such alarms in lieu of photoelectric alarms. However, research indicates that they are more costly and prone to more false alarms than photo-electric alarms, and the benefits are marginal."

Page 3, Clause 3 'Type', Note 6  
(for more on combo alarms see [page 11](#))

AustralianSenateSmokeAlarmsInquiry-WFSFSubmission\_31August15.pdf

Page: 5 of 14

## Chris Gulaptis MP Smoke Alarms Speech CSIRO and UTC Open Letters



June 2013

### 'Smoke Alarms' Speech



[Transcript](#)

Chris Gulaptis MP  
NSW Parliament | 20 June 2013

#### Speech Extract:

**“Are ionisation smoke alarms defective?** . . . I asked UTC what level of smoke did the Quell brand ionisation smoke alarm in my own home activate under Australian Standards testing. Despite four written requests<sup>1</sup> they have failed to answer my single question. I sent an Open Letter<sup>1</sup> to the President of UTC, Mr Louis Chênevert, requesting an answer.

The CSIRO is paid by manufacturers to conduct scientific testing of smoke alarms in accordance with Australian Standards. I have also written an Open Letter to Dr Megan Clark<sup>1</sup>, the Chief Executive Officer of the CSIRO, requesting an answer to my question. I have requested the media be allowed to film the testing of ionisation alarms.

The winter 2013 edition of the magazine of the Volunteer Fire Fighters Association contains an article entitled, ‘Can Australian and U.S. Smoke Alarm Standards be Trusted?’<sup>2</sup> Copies of this article and of all correspondence between me, United Technologies Corporation and the CSIRO are being sent to every member of Parliament. Lives are at stake, we have a moral imperative to get this right.

. . . David Isaac informed me photoelectric alarms typically activate between 8 to 12 per cent smoke in the CSIRO tests. What level of smoke did the Quell-branded UTC ionisation smoke alarm in my home activate under CSIRO testing? **Will the CSIRO allow the media to film their smoke alarm testing?** Mr Speaker, my interest in this matter is to save lives this winter and on this basis I ask both UTC and the CSIRO to answer my questions.”

[Chris Gulaptis MP Parliamentary Speech](#) | NSW Australia | 20 June 2013 (emphasis added)

#### Note:

1. Copies of all Mr Gulaptis' UTC/CSIRO correspondence: [www.SmokeAlarmWarning.org/csiro.html#csiro-utc](http://www.SmokeAlarmWarning.org/csiro.html#csiro-utc)
2. Can Australian and U.S. Smoke Alarm Standards be Trusted?: [www.SmokeAlarmWarning.org/reports.html](http://www.SmokeAlarmWarning.org/reports.html)  
Hear 'The Law & You' U.S. radio interview (June 2014) about UTC's settling out of court with a Confidentiality Order after being forced to supply CSIRO evidence to a US court: [www.SmokeAlarmWarning.org/ba.html#utc](http://www.SmokeAlarmWarning.org/ba.html#utc)

19 October 2014 (Australia)  
10 November 2014 (New Zealand)

60  
MINUTES

## The Alarming Truth

Why the smoke alarms in your home may not save you

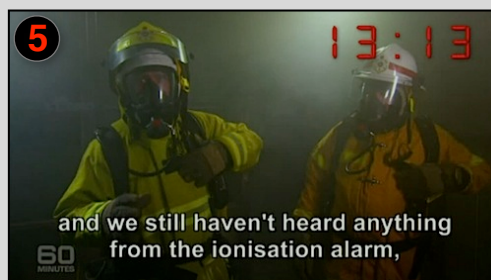
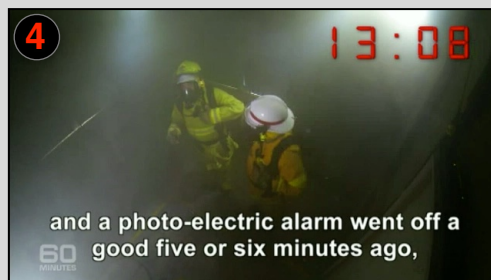
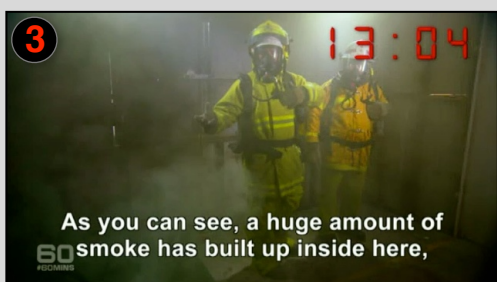
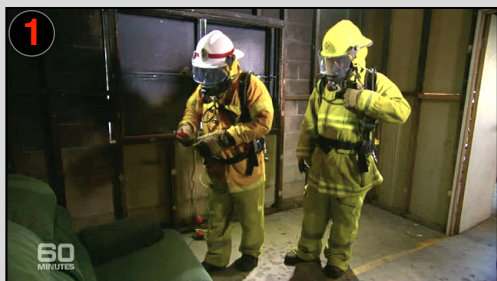


Northern Territory Fire and  
Rescue Service (NTFRS) and  
60 Minutes Smoke Alarm Tests

60  
MINUTES

### Smouldering Fire Test

Karl Stefanovic (right) watches on as NTFRS A/Asst. Fire Commissioner Grant Hamon insert a soldering iron into a foam couch to simulate a real-world smouldering fire test\*.



### Stefanovic Shocked by Tests



### IAFC's 1980 Residential Smoke Alarm Report Warned Lives at Risk with Ionisation Smoke Alarms



The [International Association of Fire Chiefs report](#) (Sept 1980) warned:

1. Ionisation alarms were not safe,
2. Fire Chiefs should recommend photoelectric smoke alarms.
3. Fire Chiefs should conduct real-world smouldering fire tests to see the results for themselves. (This was explained in detail on page 66, column 3 of the report):

[www.TheWFSF.org/iafc](http://www.TheWFSF.org/iafc)

### Residential Smoke Alarm Report



IAFC's 1980 Report

\*Note: The 60 Minutes/NTFRS test was based on the smouldering fire test recommended by the IAFC in their 1980 Residential Smoke Alarm Report as shown above.

[www.SmokeAlarmWarning.org](http://www.SmokeAlarmWarning.org)

Continued . . .





## The Alarming Truth – David Isaac's CSIRO Quote

. . . continued from previous page



October 2014

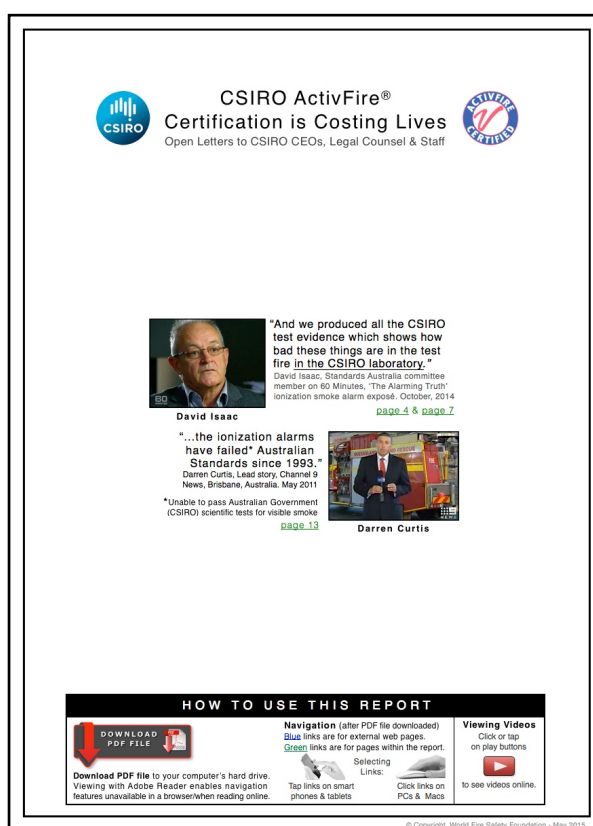
“We produced all the CSIRO test evidence that shows how bad these things are in the test fire in the CSIRO laboratory.”



David Isaac, Standards Australia  
FP002 Committee Member

### CSIRO ActivFire® Certification is Costing Lives

Open Letters to CSIRO CEO's, Legal Counsel & Staff



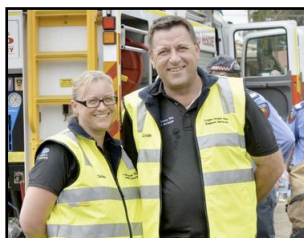
The CSIRO continues to profit from the certification of ionisation alarms when their own scientific test data proves their life-threatening defects.

[www.SmokeAlarmWarning.org/csiro.html](http://www.SmokeAlarmWarning.org/csiro.html)



October 2014

### Logan House Fire Support Network



Louie & Christine  
Founders, LHFSN

The WFSF thanks LHFSN founders, Louie and Christine Naumovski for securing the 60 Minutes story and for their ongoing work supporting the victims of house fires and advocating for photoelectric alarms.

[www.SmokeAlarmWarning.org/lhfsn2.html](http://www.SmokeAlarmWarning.org/lhfsn2.html)



Louie & Christine with  
60 Minutes Karl Stefanovic



## Senator Glenn Lazarus Smoke Alarms Speech Australian Senate Smoke Alarm Inquiry



February 2015

### 'Smoke Alarms' Speech



[Transcript](#)

**Senator Glenn Lazarus**  
Australian Senate, ACT | 11 February 2015

#### Speech Extract:


"So why, given that photoelectric alarms are considered by virtually everyone involved in the fire emergency prevention and safety industry to be the safest and most appropriate fire safety and prevention devices, are Australians still able to purchase and install ionisation smoke alarms?

The reason is that the Australian government has failed to act."  
Senator Glenn Lazarus, 'Smoke Alarms' Senate Speech | 11 Feb 2015





June 2015

### Senate Inquiry



**Glenn Lazarus**  
Senator for Queensland  
'Doing the hard yards for Queensland'™





# NATIONAL FIRE SAFETY INQUIRY

**We MUST STOP house fire injuries and deaths**

House fire deaths and injuries are preventable and yet every year across the country hundreds of Australian families are devastated by house fire related incidents. Sadly, lives are destroyed forever. We must STOP the preventable injuries and deaths. Our country can do this by amending legislation, reviewing access to and installation of, fire safety and prevention products and improving community education and awareness.

I am determined to stop house fire injuries and deaths across Australia.

I have secured the support of the Australian Senate to establish a national 'Fire Safety Inquiry' which will look into house fire incidents across the country and determine what changes need to be made to stop the carnage.

For the Video of Senator Lazarus's Senate Speech, the  
Hansard Transcript, Press Releases, radio interview, go to:

[www.SmokeAlarmWarning.org/gl.html](http://www.SmokeAlarmWarning.org/gl.html)

Note: The WFSF congratulates Senator Lazarus on his Senate Speech and for securing the Senate Inquiry.



## Ionisation Alarms: Life-Safety and Litigation Concerns: 1 of 3

### 1. Failure to Activate

Ionisation alarms' inability to safely detect fire in the early, smouldering stage was revealed in the International Association of Fire Chiefs 'Residential Smoke Alarm Report' in October 1980:

[www.TheWFSF.org/iafc](http://www.TheWFSF.org/iafc)

#### CSIRO Test Data

The Australian government's Commonwealth Scientific and Industrial Research Organisation (CSIRO) holds scientific test data which show that ionisation alarms sold in the U.S.A. do not activate in Australian Standards testing until more than three times the limit set for photoelectric alarms.

#### Legal Precedents

In 'The Law and You' radio interviews, world experts discuss the Confidentiality Order preventing disclosure of the level of smoke ionisation alarms activate under CSIRO testing:



[www.SmokeAlarmWarning.org/ba.html#utc](http://www.SmokeAlarmWarning.org/ba.html#utc)

### 2. High False Alarm & Disconnection Rate

People often say, "My smoke alarm goes off when I'm cooking toast - it must be working fine." Ionisation alarms are sub-micron particle detectors. They detect hot, invisible particles from cooking or an open flame. **They do not detect visible smoke**, even though they may appear to. Slow smouldering fires emit cool, visible smoke particles, but usually not enough of the hot invisible particles to activate ionisation alarms. They will almost always remain silent during the smouldering stage of a fire - until the fire bursts into flame, after which it is often too late to safely escape ([page 5](#)).



Research shows ionisation alarms are **over five times** more likely to give a false alarm than photoelectrics. False/nuisance alarms lull people into a false sense of security. Many think because their ionisation alarms are sensitive to cooking, they will give an early warning in the event of a real fire. This is not the case when a fire starts with an extended smouldering phase while you are sleeping.

#### Disconnection Rate

Because of the inherent false alarm problem with ionisation technology, approximately 25% of ionisation alarms are disconnected within the first two years. The disconnection rate for photoelectrics is negligible:

[www.GetSafeAlarms.com/technical-and-performance-faqs](http://www.GetSafeAlarms.com/technical-and-performance-faqs)

### 3. Places Fire Fighters at Risk

When fire fighters are called out to homes with fires resulting from smoke alarm activations, the type of smoke alarm used is critical for public and fire fighter safety. If the alarm is activated by a fire in the flaming stage, the difference between ionisation and photoelectric alarms is only a matter of a difference of seconds - if the alarm has not been disconnected and if it is in the room of fire origin.

However, most fatal fires have a long smouldering phase. Photoelectric alarms can activate an hour or more before ionisation alarms in smouldering fires. When this happens, in many cases consumers can safely put the fire out without any risk to themselves or our fire fighters.

#### Photoelectric Alarms | Safer For Fire Fighters

When firefighters are called out to a fire, if photoelectric alarms are installed, everyone should have already exited the home. When fires have not reached the flaming stage, the risk to fire fighters is dramatically reduced.

Install photoelectric alarms. Help make your family and our fire fighters safer! Find out more, read Fathers For Fire Safety's report:

**'Are Ionisation Smoke Alarms Putting Fire Fighter Lives' at Risk?'**

[www.Scribd.com/doc/245353416](http://www.Scribd.com/doc/245353416)

### 4. Environmental/Disposal Problem

All ionisation alarms contain radioactive material.



Radiation Warning Label



#### Radioactive Materials: Disposal Problem

"...Where the smoke alarm contains a radioactive source, information about the source and instructions on how to return the smoke alarm to the supplier or to the Department of Health. **Warning shall also be given that alternative disposal is not permitted.**"

Australian Smoke Alarm Standard AS3786-1993: Page 16, Clause 4.2(j)

Photoelectric alarms do not contain radioactive material.

[www.TheWFSF.org/radiation](http://www.TheWFSF.org/radiation)



## Ionisation Alarms - Life-Safety and Litigation Concerns: 2 of 3

### 5. Affordability

Combination photoelectric/ionisation alarms cost more than stand-alone photoelectric alarms. Consumers with limited budgets may not be able to afford to protect as many rooms in their home with combination alarms as with stand-alone, photoelectric alarms.

#### Consumer Groups Speak Out

Cost is one of several reasons that the IAFF, AFAC and others do not recommend combination ion/photo alarms. Australian, U.S. and New Zealand consumer organisations have discovered the defects with ionisation alarms and recommend photoelectric smoke alarms.



"The ionisation models ... were hopeless for smouldering fires ... That failing is potentially fatal."

[Consumer N.Z.](#), scientific test results, May 2006



"... it's really important that you have photoelectric alarms in your house; those smokey, smouldering fires are real killers..."

Chris Barnes, [Choice Australia](#) March 2010



"People are dying all the time because these (ionisation) smoke detectors are inadequate."

Joan Claybrook CEO, [Public Citizen](#) Feb 2008

### 6. The Dual Alarm & Ionisation/Photoelectric Combination Myth | (see AFAC position on [page 4](#))

Since the mid-1970s, fire authorities have almost exclusively promoted ionisation alarms. In December 2005, the Chief of Vermont's Barre City Fire Department lost his niece and her four children in a home fitted with hard-wired, working ionisation alarms. The fire fighters wanted to know why they'd failed to activate.

They investigated and the truth that had been buried since the IAFC's 1980 'Residential Smoke Alarm Report' ([page 7](#)) began to re-emerge. In 2009, Vermont became the first state in the USA to [pass legislation](#) mandating photoelectric-only smoke alarms.

#### Fire Fighters' Lives At Risk

How could the smoke alarm industry hide the life-threatening defects when fire fighters were beginning to discover their own lives were at risk? By adding the flawed (ionisation) technology with the effective (photoelectric) technology, they hoped no-one would

know. That's why their claim, "There are two types of fire so you need two types of smoke alarms" is so insidious. It appears to make sense - but is untrue.

#### Failure to Warn

Since 1980, manufacturers have failed to warn about ionisation alarms. However, since mid-2006, after 26 years of failing to warn, they now claim we need ionisation *and* photoelectric alarms. Is it possible their recommendation for combination alarms or having one of each is a transition away from ionisation alarms?

#### Stages of Fire - Not Types of Fire

Here is what they are not telling you. In most fatal fires, there are two stages, smouldering and flaming. You must detect fire in the early, smouldering stage, before the flaming stage, when it is too late to safely escape.

### 7. Sensor Sensitivity Manipulation (SSM)

#### The Global Push for Photoelectric Alarms

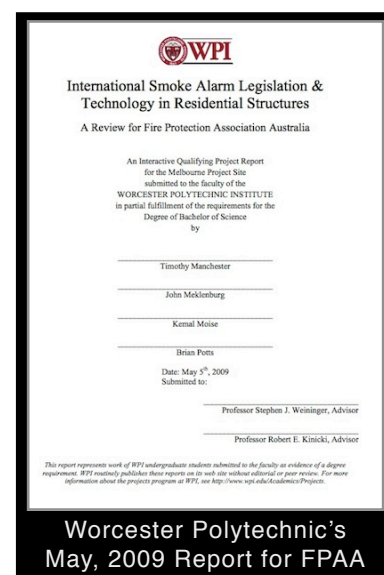
*"A group of fire protection authorities across the world, including Boston's Deputy Fire Chief Joseph Fleming and New Zealand's Adrian Butler, are leading the push towards requiring photoelectric smoke alarms in all dwellings."*

Executive Summary: Page X, Para 1

The Worcester Polytechnic Institute (WPI), one of America's oldest technical institutes, is located in Worcester, Massachusetts. The Fire Protection Association of Australia (FPAA) is Australia's major technical and educational fire safety organisation.

In 2009, the WPI produced a report for the FPAA to aid fire protection officials around the world in drafting smoke alarm legislation.

The following quotes are extracts from the WPI report:



[www.TheWFSF.org/wpi](http://www.TheWFSF.org/wpi)

continued on next page . . .





# Ionisation Alarms - Life-Safety and Litigation Concerns: 3 of 3

... continued from page 10

**Photoelectric Alarms More Effective**  
“Studies have shown that photoelectric units are more effective at detecting the types of fires that are most likely to be fatal in homes: smouldering fires . . . The only case in which the ionisation alarm responded first was when the alarm was in the room of ignition of a flaming fire. Even then, the photoelectric alarm still provided the occupants with enough time to escape safely.”  
WPI Report, Executive Summary: Page X, Para 2

**Combination Smoke Alarms**  
“However, combination units also have their drawbacks. Detectors can be combined using either an ‘AND’ gate or an ‘OR’ gate (Ian Thomas Interview, Appendix L). An OR gate will sound an alarm if the unit receives a signal from either one of the detectors. This means that the unit will sound at the earliest possible time, but also that the unit is susceptible to the most nuisance alarms due to the cumulative weaknesses of each detector. **A unit designed with an ‘AND’ gate will not sound until it receives a signal from both detectors.**”  
WPI Report, Combination Smoke Alarms: Page 36, Clause 4.1.3, Para 3

**Conclusion**  
“To provide earliest warning for all fires regardless of type, combination detectors (of the OR gate principle) are, ideally speaking, most effective. This assumes that they are fully operational, and do not have reduced or otherwise altered sensitivities (Ed Comeau Interview, Appendix A). It must also be noted that, due to the frequency of nuisance alarms from current ionisation technologies, combination detectors are likely to be disabled by a consumer, rendering them useless to warn occupants of any fire.”  
WPI Report, Conclusion: Page 35, Clause 4.1.8, Para 2

8. Litigation Concerns



In February 2007 ‘The CAN Report’ was sent by registered mail to eighty eight recipients in Australia, New Zealand, Canada and the USA.

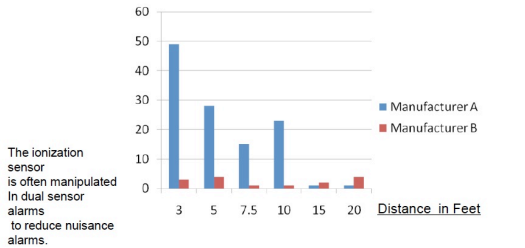
The report explained life-safety and litigation concerns when recommending selling or installing ionisation smoke alarms when empirical scientific test data held by Australia’s CSIRO proves they have life-threatening defects.

**The C.A.N. Report**  
[www.SmokeAlarmWarning.org/can.html](http://www.SmokeAlarmWarning.org/can.html)

### You Can Not Hide Ionisation Smoke Alarms’ Inherent Defects by Combining them with Photoelectric Smoke Alarms

**CPSC**  
Smoke Alarms – Pilot Study of Nuisance Alarms Associated with Cooking  
March 2010

Raw number of unwanted cooking activations in test house #9 from Dual Sensor alarms, side by side comparison of Dual Sensor alarms between two manufacturers.



Distance in Feet	Manufacturer A	Manufacturer B
3	50	2
5	28	5
7.5	15	2
10	22	1
15	2	1
20	1	2


The ionization sensor is often manipulated in dual sensor alarms to reduce nuisance alarms.

‘Sensor Sensitivity Manipulation’ (SSM) describes manipulating ionisation sensor settings in combination ionisation/photoelectric alarms to reducing nuisance alarming.

In the above CPSC\* chart, unwanted activations are shown from two leading manufacturers (for legal reasons, the CPSC protects manufacturer identities by naming them ‘A’ & ‘B’). It should be observed that manufacturer ‘A’ had 115 of the total 127 unwanted activations.



\*[Smoke Alarms - Pilot Study of Nuisance Alarms Associated with Cooking](#)  
CPSC, 03/2010

The WFSF thanks Dean Dennis from [Fathers For Fire Safety](#) for his research material



**Dean Dennis**  
Testifying for Photoelectric Legislation in California

## Queensland Fire and Emergency Services



“For both flaming fires and smouldering fires, photoelectric smoke alarms are more likely to alert occupants in time to safely escape.”

**Wake up to photoelectric smoke alarms**

Great state. Great opportunity.

**Ionisation alarms “should be replaced”**

[www.SmokeAlarmWarning.org/qld.html](http://www.SmokeAlarmWarning.org/qld.html)





## Australian Senate - Smoke Alarms Inquiry

### WFSF Response to Terms of Reference: 1 of 2

#### a. The incidence of smoke and fire related injuries and deaths and associated damage to property;

For decades it has been claimed by fire authorities that the incidence of fire related deaths and injuries has been cut in half since the introduction of smoke alarms. This is false. It is a classic example of the '[post hoc fallacy](#)'. In the Summer 2010 edition of the Volunteer Fire Fighter Association's magazine the Foundation published a report titled, 'Why are the Public, Fire Fighters & Fire Industry Personnel STILL Not Being Told the Truth about Smoke Alarms?' This report ([www.TheWFSF.org/vffa2](http://www.TheWFSF.org/vffa2)) shows:

- The number of fires since the 80s has been cut in half due to several factors (less smoking, elimination of kerosene heaters, self righting heaters, hyperbaric breathing chambers allowing burn victims to be kept alive whenever they used to die, etc).
- The number of fire deaths per 1,000 fires has only dropped marginally (around 20%)

This WFSF report has been vindicated by a November 2014 letter from the U.S. Consumer Product Safety Commission (CPSC): [www.scribd.com/doc/256543308](http://www.scribd.com/doc/256543308)

**Note:** The WFSF met with the Chairman and senior executives of the CPSC in Bethesda, Maryland in August 2015 in regards to this letter and [our petition about ionisation alarms](#).

#### b. The immediate and long term effects of such injuries and deaths;

Since 2000, the Foundation has worked intimately with numerous families who have lost family members in residential fires throughout New Zealand, Australia and the USA. Accordingly, we are privy to the ongoing (long term) depth of pain and suffering incurred by immediate and extended family and friends of fire victims as well as by fire fighters. The ongoing trauma suffered by fire fighters who as parents themselves sometimes administer mouth to mouth resuscitation on children of a similar age as their own is frequently ongoing/ long term. I will not provide any details here in this public forum. However, if called upon to testify, I would be willing if requested to provide details (whilst protecting victims' anonymity), about this issue. What may be of interest to the committee is how in many cases the pain is made worse by knowledge of the fact that they were not made aware of the known life-threatening defects in the working ionisation smoke alarms that they relied upon to supposedly protect their families.

#### c. How the use, type and installation set-ups of smoke alarms could affect such injuries and deaths;

Parts (A) and (B) of this report, the Foundation's 400+ page research website ([www.TheWFSF.org](http://www.TheWFSF.org)), Facebook site with over 50 videos ([www.Facebook.com/theWFSF](http://www.Facebook.com/theWFSF)), Scribd (documents) web site with over 200 documents ([www.Scribd.com/theWFSF](http://www.Scribd.com/theWFSF)) and other information provide evidence of the known, life-threatening defects with ionisation smoke alarms. Most residential homes in Australia are fitted with ionisation smoke alarms despite the fact that on 1 June 2006, AFAC's official position was published stating, *"that all residential accommodation be fitted with photoelectric smoke alarms . . . ionisation smoke alarms may not operate in time to alert occupants early enough to escape from smouldering fires."* The Foundation has long contended that it is an almost futile exercise advising people that photoelectric smoke alarms are 'better' than ionisation alarms. People are convinced the existing (ionisation) alarms in their homes are perfectly adequate due to incessant false alarming or because they are hard wired. When informed they are not safe they often ask, *"Why hasn't the Fire Service told me?"* or *"But they pass the Australian Standard so they must be OK."*

Circa 2004 the Foundation was requested by the Queensland Fire & Rescue Service (QFRS) to take this issue up with Standards Australia as the QFRS *"have to abide by the Standard."* We did. In 2007 Standards Australia formerly acknowledged the Australian Standard (AS3786-1993 / AS2362.17) was flawed as ionisation smoke alarms are not required to pass a test for visible smoke. Please see evidence of this (provided by the CSIRO's material scientist who is a member of the FP002 committee) and how the Australian Building Codes Board (ABCB) blocked critical amendments to AS3786-1993:

[www.TheWFSF.org/sa](http://www.TheWFSF.org/sa)

If asked to testify I will provide information obtained under the Freedom of Information Act which substantiates our belief that Scientific Misconduct may have been committed by the ABCB in relation to ABCB & Australian Research Council funded testing of ionisation smoke alarms conducted by Victoria University. This testing shows ionisation smoke alarms outperforming photoelectric smoke alarms. This is possible when tests are doctored to produce this outcome, i.e. when chemicals/substances are used in non real-world fire scenarios [such as is the case with the US standard, UL217](#). We have evidence which shows this ABCB/ARC funded research was used to block proposed Queensland legislation to mandate the use of photoelectric smoke alarms in residential applications.

Please read 'The C.A.N'. report which was sent to all ABCB Board Members and several senior staff (recipients names are in the back of the report) by registered mail in February 2007: [www.SmokeAlarmWarning.org/can.html](http://www.SmokeAlarmWarning.org/can.html)

Please read the WFSF's Open Letter to the ABCB of 16 June 2009: [www.TheWFSF.org/abcbol1](http://www.TheWFSF.org/abcbol1)



## Australian Senate - Smoke Alarms Inquiry

### WFSF Response to Terms of Reference: 2 of 2

#### **d. What smoke alarms are in use in owner-occupied and rented dwellings and the installation set-ups;**

In a recent survey conducted by the WFSF we found that all project home builders on the Sunshine Coast only install ionisation smoke alarms. Most of these are national builders. Details of this will be provided in the pending supplemental document (D). It has concerned the WFSF that most Australian and New Zealand fire brigades continue to primarily promote 'working' smoke alarms. This is an almost futile exercise. Global research shows the number one reason for disconnection of smoke alarms is due to incessant false alarms. Advising people that ionisation smoke alarms have about 5 times the disconnection rate of photoelectric alarms educates the public about the solution to disconnection.

#### **e. How the provisions of the Australian Building Code relating to smoke alarm type, installation and use can be improved;**

If the ABCB were to have adopted the recommendations of the FP002 committee and change the Australian Building Code (now referred to as the National Construction Code) to offer residential dwellings the same level of protection afforded to some commercial applications the problem would have been a lot closer to be solved.

#### **f. Whether there are any other legislative or regulatory measures which would minimise such injuries and deaths;**

This will be covered in the supplemental document (D)

#### **g. Any related matter.**

The WFSF will be providing the Committee with information about sprinklers subsequent to spending three days with the Fire Protection Engineer credited with installing the first sprinkler system in a residential dwelling in the USA and writing America's first residential fire safety standard. Sprinklers are an excellent addition to existing interconnected photoelectric smoke alarms in all bedrooms, lounge rooms and paths of egress. However, due to requisite government cost benefit analysis they do not make any economic sense when very few people have a proper smoke alarms system installed. The two largest manufacturers know the writing is on the wall for ionisation alarms evidenced by the fact they have both produced excellent, affordable, photoelectric-only ranges.

#### **Conclusion**

The CSIRO and manufacturers who have had their ionisation smoke alarms tested to AS3786-1993 hold empirical scientific test data showing that ionisation 'smoke' alarms are unable to reliably detect visible smoke, despite AS3786-1993's requirement that, "*The smoke alarm shall be designed to respond reliably to the presence of smoke.*" (clause 2.1).

Despite repeated requests to the CSIRO and manufacturers to provide CSIRO AS2362.17 test data, they refuse to provide it. The critical worth of this CSIRO data was demonstrated in a recent court case in Montgomery Alabama when UTC (Kidde, Quell Chubb) were deposed (forced) by the courts to provide this information. Within days of doing so they settled out of court with a Confidentiality Order. Please take the time to listen to this radio interview for critical insight into this issue: [www.SmokeAlarmWarning.org/ba.htm#utc](http://www.SmokeAlarmWarning.org/ba.htm#utc)

Given the evidence of dozens of ongoing needless deaths in homes fitted with ionisation smoke alarms in Australia, and thousands across the USA, Canada and the UK etc, the Foundation understands and accepts that manufacturers will not provide CSIRO test data as a corporation's primary function is to protect shareholder profits. However, the CSIRO is a government department and as such it is not acceptable for them to hide behind the veil of "commercial in confidence" when public lives are clearly at risk. Before the date of the submission the 'History' section on our website will be completed. This will allow committee members to fully understand why this controversy has raged for forty years.

May I respectfully request that the committee allow me the opportunity to testify before you.

Thank you for the opportunity to provide this submission.

Sincerely

Adrian Butler  
Chairman, Co-Founder, Former Fire Fighter  
**World Fire Safety Foundation**