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## Summary

- Almost all smoke alarms installed globally (whether hard-wired or battery) are the ionization type.
- On 01 June 2006, the Australasian Fire Authorities Council (AFAC) published a Position Statement advising that the only type of smoke alarm suitable for residential accommodation is the photoelectric type.
- Despite AFAC's Position Statement, the AFAC and other authorities are in an extremely difficult political position because ionization smoke alarms currently pass Australian Standards acceptance criteria.
- The Australian Standards Fire Protection Committee FP2 oversees AS3786 which governs the testing criteria for smoke alarms. FP2 has submitted to the Australian Building Codes Board (ABCB) a proposed amendment to this Australian smoke alarm standard to rectify the inadequacies of the acceptance criteria. The ABCB has blocked this amendment from inclusion in the 2007 Building Code of Australia (BCA).
- The US National Institute of Standards & Technologies (NIST) 2004 report *Performance of Home Smoke Alarms* is relied upon by Fire Brigades, safety organisations and regulatory authorities globally. **The Conclusions of NIST's Report are Contradicted by their own Data.**
- Recommending, selling or installing ionization smoke alarms for residential applications could be deemed an act of criminal negligence.

## Collaborative Campaigning

- This is a 'Collaborative Campaigning' document.
- As some organisations and businesses involved as stakeholders in this project focus on their specific goals they are often unaware of the big picture.
- Publishing stakeholder's contact details facilitates exchanges and collaborative resolution.
- The CAN Report is a 'living document': any aspect of this Report may be updated, at any time, including but not limited to all 'Open Letters', as new information emerges and more stakeholders are included. Please ensure you have the latest version of this which is at: [www.theCANreport.org](http://www.theCANreport.org)



# Fire Chiefs Plead with Media for Help in Reducing Fire Fatalities

**Fairfax, Va., Feb. 16, 2007...** The International Association of Fire Chiefs is pleading with the media to help us inform the public of the high number of house fires with fatalities that have occurred since the beginning of February. “We have lost too many people in home fires in the last two weeks,” said President Chief Jim Harmes. “Last night, six were killed in a house fire in Louisiana, two in house fires in Tennessee and one in my own community in Grand Blanc, Michigan. It is mid-February and by media reports, 59 people in the U.S. have perished in house fires in 17 states since the beginning of this month. We have got to do something,” said Harmes.

“These are not just statistics; these are lives—lives of the people we serve in our communities. These are the same lives that you, the media, serve. Help us to get the word out to our readers and listeners. Our citizens now have more protection available for their homes than ever before and yet people are losing their lives because they are not taking this protection seriously.”

A quick check of media reports for the first 16 days of February reveals 59 house-fire fatalities. Thirty fatalities were single or double fatalities, and 29 deaths resulted from just six house fires and were counted as multiple fatalities (three or more individuals). A list of these deaths by date and location is found at the end of this release.

“These are not just numbers; these are personal tragedies that each of us as a fire chief feels every time a life is lost. Help us prevent these needless tragedies. Help us get the word out to those communities that we—the media and the fire departments—both serve,” said Harmes.

Please, help us pass along these life-saving suggestions:

- ✎ **Check smoke and carbon monoxide alarms to be sure they are working properly.**
- ✎ **Have an escape plan with a meeting place.**
- ✎ **Once you exit your home, DO NOT return. Too many people lose their lives going back into a burning home.**
- ✎ **Stoves are not made for heating homes.**
- ✎ **Supplemental heating devices should be used and maintained in accordance with manufacturer recommendations. Keep combustibles clear. Do not leave supplemental heating devices unattended.**
- ✎ **If you are burning wood in your fireplace, make sure your chimneys are properly maintained. That goes for your furnace, as well.**
- ✎ **If candles are necessary, use them in a safe environment in a fireproof container and away from children. Do not leave them unattended.**
- ✎ **And for the long term, consider getting a residential fire sprinkler. According to statistics, the risk of death by fire is reduced by 82 percent when smoke detectors are accompanied with residential fire sprinklers.**

### List of fire fatalities, based on media reports, for the first part of February:

Feb 3	New York (Long Island)	family of three	Feb 10	Pennsylvania (South Philadelphia)	one fatality
Feb 3	West Virginia (Bens Run)	one fatality	Feb 11	Connecticut (Waterbury)	one fatality
Feb 3	Wisconsin (Marinette County)	two fatalities	Feb 11	Ohio (Mount Vernon)	two fatalities
Feb 4	New York (Mount Vernon)	one fatality	Feb 11	Pennsylvania (West Philadelphia)	family of five
Feb 4	Texas (San Antonio)	one fatality	Feb 11	Texas (Fresno)	four fatalities
Feb 5	Ohio (St. Marys)	one fatality	Feb 12	Michigan (Saginaw)	one fatality
Feb 6	Rhode Island (Providence)	one fatality	Feb 13	Indiana (Indianapolis)	one fatality
Feb 6	Tennessee (Maryville)	family of four	Feb 14	Nevada (Las Vegas)	two fatalities
Feb 7	Kentucky (Bardstown)	family of 10	Feb 14	Washington (Snohomish)	one fatality
Feb 7	Washington (Selah)	one fatality	Feb 15	Delaware (Ogletown)	one fatality
Feb 8	Kansas (Topeka)	one fatality	Feb 15	Michigan (Grand Blanc)	one fatality
Feb 8	New York (Brooklyn)	two fatalities	Feb 15	Pennsylvania (Mount Joy)	one fatality
Feb 8	New York (Newburgh)	one fatality	Feb 15	Pennsylvania (West Philadelphia)	family of three
Feb 8	Wisconsin (Milwaukee)	two fatalities	Feb 16	Tennessee (Palmyra)	one fatality
Feb 9	Delaware (Wilmington)	one fatality	Feb 16	Tennessee (Smyrna)	one fatality
Feb 10	Minnesota (St. Paul)	one fatality			



THE AUSTRALIAN BUILDING CODES BOARD

21 February, 2007

Attn: Recipients - Australia & New Zealand (pages 14~16)  
 Re: **Fire Chiefs Plead for Help in Reducing Fire Fatalities** (page 3)

Dear [Sir/Madam]

I am writing on behalf of the World Fire Safety Foundation to invite you to join a growing team dedicated to reducing fire fatalities.

The Australian Building Codes Board (ABCB) has recently chosen to block the adoption of a proposed amendment to Australian Standard 3786 to rectify the inadequacies of acceptance criteria for ionization smoke alarms, the type of smoke alarm currently installed in the vast majority of Australian and New Zealand homes.

Recent scientific research has confirmed that ionization alarms do not safely detect smouldering fires, the type of fire that commonly kills. On 01 June 2006, the Australasian Fire Authorities Council (AFAC), as the peak representative body of all Australian and New Zealand Fire Brigades, issued a position statement that declared: **"... all residential accommodation be fitted with photoelectric smoke alarms."**<sup>(1)</sup> This world precedent and laudable position is supported by the Australian Standards Fire Protection Committee FP2, the Australian Consumers' Association, the Fire Protection Association Australia, the New Zealand Consumers' Institute and the New Zealand Safety Council.

When confronted with the evidence regarding the very serious inadequacies and unacceptable failure rate of ionization alarms, all these leading authorities had the courage and vision to reverse earlier decisions and place the public's interest above all other considerations by unequivocally recommending photoelectric smoke alarms.

We all have the moral imperative to alert the public. Now the ABCB has a golden opportunity to follow these industry experts and include FP2's amendment in the Building Code of Australia. No one wants this needless loss of life to continue. You could be held accountable for subsequent injuries or deaths, if these were avoidable, just as easily as you could appropriately be credited for saving them.

The attached report sets out the key reasons why the ABCB should reconsider its position and facilitate the appropriate and responsible choice in light of conclusive research. This reversal, which we are confident will be the ABCB's response to the information contained herein, will be honoured as a major contribution to the aim that galvanises our Foundation, the authorities previously mentioned and the ABCB - the safety of our fellow citizens in their own homes.

We respectfully request the Board to respond to this communication (to the Australian or New Zealand address below) prior to our press release on Wednesday 21 March 2007 which will contain a list of those who actively support our position.

In the 1985 'Lawyer's Alert' magazine, US Lawyer Edward M Swartz said:  
**"There is something very wrong with selling [ionization] smoke detectors that don't work, that lull consumers into a false sense of security, and that end up taking the very lives that they were intended to save, if that happens the people who are responsible should be made to pay..."**<sup>(2)</sup>

It would be beneficial to our common endeavour towards ever greater Fire Safety if the WFSF were able to include you personally, or your organisation, in a list of our supporters. Please contact us if you have any further questions.

Yours Sincerely

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PROJECT SPONSORS OF THE NIST REPORT

(07/2004 Technical Note 1455)

22 February, 2007

Attn: Recipients - USA & Canada (page 16)
Re: Fire Chiefs Plead for Help in Reducing Fire Fatalities (page 3)

Dear [Sir/Madam]

I am writing on behalf of the World Fire Safety Foundation to invite you to join a growing team dedicated to reducing fire fatalities.

Your organisation was involved as a Project Sponsor of the 2004 report 'Performance of Home Smoke Alarms' issued by the National Institute of Standards & Technologies (07/2004, Technical Note 1455). (3)

Scientific tests conducted by the Building Research Association of New Zealand were aired on national New Zealand TV in May 2006 and confirmed unequivocally that ionization smoke alarms are inherently dangerous because they do NOT detect smouldering fires in time for occupants to safely escape. This is in direct conflict with the conclusions of the 2004 NIST report which are, in fact, not supported by the data within it. The NIST report has caused substantial delays in the adoption of a critical revision to the Australian Standard for smoke alarms. These delays WILL cost lives.

The World Fire Safety Foundation believes that the NIST Report is effectively a death warrant. The Foundation will seek and encourage victims of this misinformation to instigate actions against individuals or organisations involved with any failure to act with due care and responsibility to rectify this problem.

Chief Joseph Fleming of the Boston Fire Department has spent 16 years analysing international smoke alarm research and has issued objective papers that have been instrumental in prompting the Australian Standards organisation to mandate photoelectric smoke alarms in Australian and New Zealand homes. On page two of this letter Chief Fleming has identified a viable way to significantly reduce US fire fatalities. Entries in the Timeline indicate where NIST and the CPSC have failed to respond to information supplied by Chief Fleming (page 7: 10/2006 and 12/2006).

Consistent with our Australian fire brigades and fire authorities, US fire-fighters have shown courage and integrity by making available live real-world testing of smoke alarms on the internet. (4) These tests adhere to the specifications of the IAFC's 1980 Residential Smoke Alarm report and confirmed the IAFC's 1980 warning that ionization smoke alarms are "so slow to react in a smouldering fire that lives may be in danger." In contrast, NIST (falsely) claims that "ionization smoke alarms continue to provide time for occupants to escape" However, NIST Report's conclusions are contradicted by their own data contained within the report (page 9).

On page 2, Chief Flemings comments "Of course this requires that the USFA admit that it [photoelectric technology] is superior to ionization technology. An action, which the USFA does not appear willing to take." However, there is something far more important than the reputations, both individual and corporate, of those within government, consumer organisations and the fire industry - the lives of those they are entrusted to protect. We all have the moral imperative to protect lives by alerting the public of the very real and present danger posed by the ionization smoke alarms supposedly protecting their families. No one wants this needless loss of life to continue. You could be held accountable for subsequent injuries or deaths, if these were avoidable, just as easily as you could appropriately be appropriately credited for saving them.

This report provides "clear evidence of a sufficiently compelling hazard in order to justify a change" and therefore advocates the banning of ionization smoke alarms (or the mandating of photoelectric smoke alarms) even though it may "literally put companies out of business" ( page 7, 1999). We believe you will agree that your organisation has a responsibility to petition NIST to rectify their report so its conclusions do not contradict the data contained within it.

On behalf of the World Fire Safety Foundation I shall contact your personal assistant to establishing a mutually-convenient time to discuss this issue with you. It would also be beneficial to our common endeavour towards even greater Fire Safety if the WFSF were able to include you and/or your organisation, in a list of our supporters.

Yours Sincerely

[Handwritten signature of Adrian Butler]

Adrian Butler
Co-Founder

[Handwritten signature of Karl Westwell]

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PROJECT SPONSORS OF THE NIST REPORT  
(07/2004 Technical Note 1455)

Extract from a letter to the US Fire Administration by Chief Joseph Fleming (10/2006).  
(**Note:** All quotes from Chief Fleming's letter are in bold)

**"I have often been cautioned that I should be quiet, "because we do not want the public to lose faith in smoke detectors." This statement implies that lives will be lost if we tell the American public the truth. I think the exact opposite is true ... how many lives have been lost because the American Public was not told the truth?"**



In his letter Chief Fleming provided evidence to show that in the US alone:  
**"The Potential number of lives saved [from 1990 through 2005] if photoelectric technology [had been] used instead of ionization: 11,256."**

Chief Fleming believes that the estimated number of lives potentially saved is conservative. The World Fire Safety Foundation agrees. In addition for each life lost in a house fire, many more are injured or maimed. This pain and suffering could be so easily avoided if the smoke alarms supposedly 'protecting' consumers would sound a timely warning BEFORE fires in their homes becomes dangerous.

Chief Fleming also stated:

**"The bad news is that thousands have died who did not need to die. The good news is that I have identified a relatively inexpensive way to reduce fire fatalities in this country (the United States) by hundreds each year by utilising photoelectric technology to its full advantage. Of course, this requires that the USFA admit that it [photoelectric technology] is superior to ionization technology. An action, which the USFA does not appear willing to take. I hope this provides the USFA, the CPSC, NIST, HUD etc, the incentive to honestly investigate the problem and start by objectively reviewing my information and answer all of my questions."**

**World Fire Safety Foundation Comments:**

In its 'Residential Smoke Alarm Report' (09/1980), the IAFC warned:

**"Promotion and advertising [of ionization smoke alarms] is misleading the fire chief and the public ... lives may be in danger."**

The IAFC said they **"...can take no other choice but to recommend the installation of photoelectric detectors."** Their advice went unheeded. Twenty-seven years later the IAFC chiefs are still pleading, "...help reduce fire deaths." The World Fire Safety Foundation has evidence that for thirty years NIST, CPSC, USFA and HUD and other organisations and individuals have been aware of the inherent dangers of ionization smoke alarms. It is alleged that people within these organisations have engaged in:

- ignoring, distorting or suppressing evidence,
- manipulating research data,
- continually calling for more and more tests to maintain the status quo.

These actions evade responsibility for past failures to discharge legal and moral obligations to the American public.

**This must stop!**

There is **"clear evidence of a sufficiently overwhelming hazard to justify a change."** (page 7, 1999) It is time for all organisations, including your own, who bear responsibilities in this matter, to heed the evidence and to take an active role in reducing fire fatalities. It does not seem that there is any justifiable reason for any other course of action.



Lieutenant  
Russell Ashe

**"This is information that no one in this fire fire station had until a few days ago..."**

- stated by Lieutenant Russell Ashe in June 2006 in Barre City, Vermont, after viewing the World Fire Safety Foundation's film 'The Aquarium Test.'
- What inspired these 'Medal of Honour' fire-fighters to join the global campaign to help reduce fire fatalities? Find out at: [www.TheWorldFireSafetyFoundation.org/ffus](http://www.TheWorldFireSafetyFoundation.org/ffus)



- 1935** Swiss physicist, Walter Jaeger, develops ionization device to detect poisonous gas.
- mid-60s** Manufacturers recruit firemen and use misleading advertising to sell new ionization 'product of combustion' detectors (falsely claiming that ionization alarms will detect fire "before any visible sign of heat or smoke.")
- 1976** US National Bureau of Standards (NBS) conduct first scientific 'real world' smoke alarm tests. The 'Dunes Test' report elaborated conclusions that do not disclose the long delay (over one hour on average) of ionization alarms to detect smouldering fires.
- 1976** Dick Patton, Fire Protection Engineer, distributes 3,000 'Smoke Detector Fraud' reports claiming NBS failed to disclose to the public that ionization alarms did not safely detect smouldering fires in the conclusions of the 1976 Dune Tests.
- 1978** John Gerrard, Chief Engineer and GM, LA Fire Department, discovers ionization alarms are defective in 'California Fire Chiefs Tests'.
- 1978** IAFC requests **4%** maximum limit by Underwriters' Laboratories (UL) in ionization smoke tests. UL tests to **10%** per foot.
- 1979** Walter Schuchard, Fire Protection Engineer publishes 'Smouldering Smoke' article in NFPA journal warning that ionization alarms do not respond to smouldering synthetics and warning that the UL217 testing of ionization alarms in smouldering fires is inadequate.
- 1980** John Gerrard heads special committee that publishes the 'Residential Smoke Alarm Report' in the 09/1980 issue of 'The International Fire Chief.' This International Association of Fire Chiefs (IAFC) report warns that **despite US federal government tests**, ionization smoke alarms "...will not respond quickly to a smouldering fire ... lives may be in danger" and that **"...promotion and advertising [of ionization alarms] is misleading the Fire Chiefs and the public."** Gerrard explains a **smouldering fire test that Fire Chiefs can perform so they can see for themselves the dangers of ionization alarms.**
- 1980** UL produce a test that allows ionization alarms to pass because of high US home fire death rate (9,000 p/a). Only expensive, hard-wired photoelectric available - battery ionization alarms were immediate solution. However, when LED technology was developed for photo-electrics 5 years later (i.e. they also became battery operated) the **tests for ionization alarms were NOT revised.**
- 1980** John Gerrard appears on Utah TV, **recommending photoelectric alarms and** warning about the ionization alarms.
- 1985** US retailer, Sears Roebuck was fined \$2.8M when the failure ionization alarms led to 3 deaths. Lawyer Edward M Swartz describes ionization alarms as 'evil' because they **"...lull consumers into a false sense of security."**
- 1986** Prudential High Rise Fire. Despite thick smoke on upper floors ionization alarms fail to operate. Boston, Massachusetts Fire Department (BFD) reports the most likely reason as ionization detector's inability to detect 'large particle' aged smoke.
- 1990** Chief Jay Fleming (BFD) is assigned to research smoke detector technology to devise a solution after 5-person fire fatality.
- 1996** US 20/20 documentary: After 100s of written complaints, the world's largest smoke alarm manufacturer denies the problem with ionization alarms claiming "if those fires had been serious fires the [ionization] alarms would have gone off."
- 1996** Due to Chief Fleming's research, the Massachusetts Building Code limits the use of ionization technology.
- 1998** \$21.3M settlement in Mercer case after ionization alarm fails and Bradley Mercer dies. **Punitive damages** awarded because manufacturer **"failed to disclose the known limitations of the [ionization] detector to the consumer."**
- 1998** Chief Fleming presents paper 'Ionization vs Photoelectric Detectors - A Review of the Literature' to the National Fire Protection Research Foundation Symposium and forwards it to CPSC, NIST & USFA.
- 1999** Chief Fleming submits extensive research data to NFPA72 warning that detectors utilizing ionization technology as the only means of detecting a fire, should not be allowed in residential occupancies. The NFPA72 Committee responds: "The Committee feels that the data does not make a sufficiently compelling case for the banning of an entire technology. There would need to be **clear evidence of a sufficiently compelling hazard in order to justify a change** that would deny ionization technology to consumers and to **literally put companies out of business.** A comprehensive testing project is being considered by the US Consumer Safety Product Commission (CPSC). If these tests indicate a compelling reason to ban ionization technology the committee will reconsider." (emphasis added)  
**Note:** The NFPA72 committee **does not refute any aspect of any of the research data** supplied by Chief Fleming.
- 12/1999** The Washington Post article, 'How Safe are Products Bearing the UL Mark?' exposes UL's inadequate testing criteria.
- 01/2000** Canadian TV airs 'Silent Alarms' showing scientific tests of smouldering fire where ionization alarms had over a 75% failure rate.
- 06/2000** World Fire Safety Foundation (WFSF) founders Adrian Butler & Karl Westwell start campaign after viewing 'Silent Alarms'
- 2001** Mercer case settles out-of-court with a settlement amount protected by a confidentiality order.
- 06/2003** National Institute of Standards & Technology (NIST, formerly **NBS**) publishes a report **containing misleading conclusions** that is used by Fire Brigades and safety organisations globally to justify the ongoing promotion of ionization smoke alarms.
- 04/2004** Australian Standard 1670.1 mandates *photoelectric* alarms in sleeping areas and exits ways in **commercial buildings.**
- 09/2004** Dick Patton & Adrian Butler warn about ionization alarms on Australian TV. David Isaac, Fire Protection Assn. concurs.
- 09/2004** David Calvert, New Zealand Safety Council CEO launches the WFSF's 'Stop the Children Burning' documentary in Tasmania, Australia. Fire Survivors and fire safety campaigners from USA, Australia and New Zealand attend.
- 01/2005** Adrian Butler, WFSF, appears on New Zealand TV stating, **"the problem (with ionization alarms) goes back to the Standards."**
- 04/2005** On ABC Radio, Adrian Butler discusses litigation concerns with ionization alarms based on US legal precedents.
- 01/2006** The subcommittee of the Massachusetts State Building Code Board votes unanimously to limit the use of ionization technology due to their failure to adequately detect smoke from smouldering fires.
- 02/2006** After reviewing research data from Chief Fleming, case histories relating to ionization alarms supplied by US attorney Mr Jim Fetterly (page 13), and other research, the Australian Standards Committee FP2 discover inadequate acceptance criteria for ionization alarms and commit to resolving the problem (see quote on page 8 from David Isaac, ASFP2 Committee Member).
- 04/2006** In Utica, N.Y., the world's largest manufacturer was fined **punitive damages** when two die after ionization alarms fail.
- 05/2006** David Isaac and Adrian Butler discuss on ABC Radio possible legal implications of the New York case and ionization alarms.
- 05/2006** TV New Zealand demonstrates the failure of **ionization alarms in scientific tests** by the Building Research Association of N.Z.
- 06/2006** **After extensive research** the Australasian Fire Authorities Council publishes **'Position on Smoke Alarms in Residential Accommodation'** document that recommends the installation of **ONLY photo-electric alarms** in Australian and N.Z. homes.
- 06/2006** After WFSF's 'Aquarium Test' on Australian TV, Vermont fire-fighters produce and publish on the Internet, the first US Aquarium Test.
- 06/2006** The attempt of Aust. Std. to rectify **residential** Standard is blocked by the ABCB due to misleading conclusions in 2004 NIST Report.
- 07/2006** Based on a paper by Chief Fleming, UL and the International Fire Protection Research Foundation commit to analysing different types of smoke emitted in home fires. This study will fulfil the wishes of researchers first documented over 25 years earlier (i.e. the IAFC's 1980 'Smoke Alarm' report), which was largely forgotten until Chief Fleming's research.
- 10/2006** On 15 Oct 06, Chief Fleming sends the unpublished critique to NIST about their 2004 Smoke Alarm Report that is utilised by Fire Brigades and other authorities globally (Technical Note 1455 - 07/2004). **NIST'S CONCLUSIONS ARE CONTRADICTED BY THEIR DATA.** NIST does not respond. See 'NIST Report Exposed' (page 10).
- 12/2006** Chief Fleming has filed more than 30 complaints of fire fatalities with US Consumer Product Safety Commission (CPSC) that include: 3 fatalities at Miami University of Ohio (04/05), 1 at University of Nebraska-Lincoln (12/06), 5 at Barre, Vermont (12/05) and 2 in Newport News, Virginia (10/06). **CPSC do not respond to any of Chief Fleming's complaints.**
- 02/2007** ASFP2 submit further evidence to the ABCB to rectify inadequate acceptance criteria for ionization alarms.
- 02/2007** WFSF's 'Aquarium Test' show **ionization alarms failing** in tests by **US Fire-fighters** that adhere to the specifications of the IAFC's 1980 Report (see 1980).

### The Purpose of this Report is:

- 1) To highlight potential legal implications for the Australian Building Codes Board (ABCB), regarding the delay in adopting and referencing a critical amendment to Australian Standard 3786 - *Smoke Alarms*.
- 2) To alert the public to the fact that the ionization smoke alarms supposedly protecting their families are inherently dangerous.
- 3) To inform businesses and organisations globally of their vulnerability to litigation if they recommend, sell or install ionization smoke alarms.

### Two Alarm Types

There are two common types of residential smoke alarms: the ionization and photoelectric. Ionization-type alarms account for almost all smoke alarms installed in residential accommodation.

### The Detector of Invisible Smoke

In the late 1930's a Swiss physicist, Walter Jaeger, endeavoured to invent an ionization device to detect poisonous gas. Jaeger used a small amount of a highly radioactive material that emitted thousands of ions every second into his devices' ionization sensor. Jaeger thought that when poisonous gas entered the sensor it would bind with the ionized atoms in the air thereby causing a drop in current which would be detected by the electronic circuitry in his detector.

In an attempt to effectively operate his detector, Jaeger blew hot smoke from a cigarette into the sensor which registered a drop in current. However, Jaeger's detector was **NOT** activated by the **visible** smoke but by the **invisible**, hot 'particles of combustion' (i.e. less than 1 micron in size) *contained within* the smoke. Ionization detectors do not detect visible smoke - they are **only** triggered by *invisible, sub-micron* particles.

Ionization detectors were first marketed in the US in the 1960s in competition with existing heat alarms and photo-electric smoke alarms. Manufacturers claimed this new device would activate *before* any heat or smoke was noticed and recruited fire-fighters to sell and promote what they called a 'product of combustion detector'.

**"Ionisation detectors are 'product of combustion detectors', NOT smoke detectors and the public have been misled into thinking all smoke alarms are equal."**

Daryl Brown, G.M., Chubb Fire & Safety, New Zealand

### The Number One Fire Myth

When ionization detectors 'false alarm', the public

are lulled into a false sense of security and think the alarms are 'really sensitive' - especially when the false alarms frequently occur despite the lack of visible smoke.

Even though **no visible smoke** may be present, ionization alarms can activate when:

- **Cooking toast.** The red hot elements in your toaster create *invisible particles of combustion*.
- **Cooking a roast or grilling.** Opening an oven door when cooking a roast, or fumes from grilling steak releases *invisible particles of combustion*.
- **Having a BBQ.** *Invisible particles of combustion* are emitted from hot coals, electric elements or gas from your outside BBQ which can activate an ionization alarm inside your home.
- **Mowing the lawn.** *Invisible particles of combustion* from the exhaust fumes of a whipper snipper/line trimmer outside an open window can activate an ionization alarm in your bedroom.
- **Starting your car.** *Invisible particles of combustion* from the exhaust fumes of cars, boats and motor bikes can trigger an ionization alarm in your garage.

These examples demonstrate how ionization 'smoke' alarms detect *invisible particles of combustion* which cultivates the number one fire myth:

**"My smoke alarm goes off when I burn the toast - so I'm ok."**

This fire myth prompted US lawyer, Edward Swartz from Swartz and Swartz to state that because of their frequent false alarming, ionization alarms **"lull consumers into a false sense of security."** He also said that ionization alarms can **"end up taking the very lives that they were intended to save."**<sup>(6)</sup>

Tragically, despite frequent false alarming, ionization alarms do NOT detect cool *visible* smoke from smouldering fires because this type of smoke does NOT contain sufficient sub-micron particles to activate the alarm. Unfortunately, the type of fire that is most likely to occur while you are sleeping (when you are most vulnerable) is a smouldering fire.

### Scientific Evidence and Legal Implications

In June 2006, the Australian Standards Fire Protection Committee FP2 issued a critical amendment to AS3786 and submitted it to the ABCB as **a matter of urgency** for inclusion in the 2007 Building Code of Australia (BCA).

The amendment was initiated after the discovery of serious flaws in the Australian Standards smoke alarm acceptance criteria for ionization devices.

The recommendations advocated by the amendment are supported by scientific evidence and legal precedence that unequivocally establish the inherent dangers of ionization smoke alarms in residential applications.

### Smoke Alarm Recall

**"...what we discovered to our horror, as the Australian Standards Committee, doing some enquiries into test data, was that ionization smoke alarms are allowed to go to 50-60% [smoke] obscuration per metre ... Dangerously High, Totally Unacceptable!"**

David Isaac, Australian Standards FP2 Committee Member, from 'Smoke Alarm Recall' at: [www.TheWorldFireSafetyFoundation.org](http://www.TheWorldFireSafetyFoundation.org)







**The Science**

Recent scientific research confirms that ionization smoke alarms (both battery and hard-wired) are dangerous: in the case of smouldering fires, the type of fire that most commonly kills sleeping occupants, ionization alarms typically do NOT provide sufficient time to safely escape.

In contrast to this, **photoelectric smoke alarms provide sufficient time to safely escape both smouldering and flaming fires.**<sup>(7)</sup>

The World Fire Safety Foundation has noted that the general public has very little awareness of photoelectric smoke alarms,<sup>(8)</sup> and that availability of these devices is limited.

**BRANZ Publishes Tests**

The public has been misled into thinking ionization alarms will activate early in *any* type of fire. The following is typical of results from scientific tests performed over the past 30 years.

In May 2006, the Building Research Association of New Zealand (BRANZ) subjected ionization and photoelectric alarms to flaming and smouldering fires under controlled scientific conditions.<sup>(9)</sup>

In the smouldering fire tests the photoelectric alarms provided sufficient early warning. However the ionization alarms failed the same smouldering fire tests, resulting in the following dialogue between Corinne Ambler of TVNZ and William Whitley of the New Zealand Consumer's Institute, that was aired on prime-time New Zealand TV:

CA: "That's pretty shocking though isn't it?"

WW: "It is - it's a big worry"

CA: "I mean, you buy a smoke alarm, you expect it to go off."

WW: "Precisely - and it may not."

**"The public believes that by buying a common smoke detector off the shelf, that before their house was filled with smoke that detector would sound and give them a warning. I think they believe that ... That is ABSOLUTELY NOT what will happen."** (emphasis added)

Dr B Don Russell, PhD, Texas A&M University

**Legal Precedence**

As already stated, scientific evidence and legal precedence has established that "perfectly legal, properly functioning, Underwriters Laboratories-approved"<sup>(10)</sup> ionization smoke alarms are dangerous in residential applications because of their known, dangerous performance limitations in smouldering fires.

Legal precedence in this matter derives from the landmark Mercer case where Judge Schoenthaler surmised...

**"A smoke detector that sounds approximately 19 minutes after smoke reached its sensing**

**chamber is like an air-bag that does not deploy until 19 minutes after a car accident."**<sup>(10)</sup>

Hon. David E Schoenthaler, US Mercer case (04/1998)

Regardless of the known and dangerous defects of ionization alarms, manufacturers continue to mass-produce them, retailers continue to recommend and sell them, and electricians continue to install them.

**The Excuse for Continued Sales**

In the process of marketing ionization smoke alarms, it is frequently claimed that "ionization smoke alarms respond faster to flaming fires, while photoelectric smoke alarms respond quicker to smouldering fires."

Whilst this statement is *technically true* it totally lacks integrity. The Foundation believes that such statements, without further qualification, could be deemed criminal acts of negligence.<sup>(11)</sup>

What is *not* explained to the public in such statements, is that **while BOTH types of alarms provide sufficient time to safely escape from flaming fires, ionization smoke alarms typically do NOT provide sufficient time to safely escape from smouldering fires. Photoelectric alarms DO typically provide adequate time for safe escape from smouldering fires.**

The marketing of ionization alarms persists because they currently pass global Standards, even though published scientific research and legal precedence substantiate that **recommending, selling or installing ionization alarms could be deemed criminal acts of negligence.**

The Foundation's *Aquarium Test* film contains revelations by a member of the Australian Standards Fire Protection Committee FP2 that the global requirements for Standards testing of ionization alarms have been proven as inadequate and that ionization smoke alarms are not 'fit for purpose' in residential applications.

The credibility of the procedures for smoke alarm testing has been challenged for over thirty years.<sup>(12)</sup> In 2006, the Australian Standards FP2 committee investigated the testing requirements for smoke alarms in Australia. They discovered that **if ionization alarms were required to pass the same Australian Standards smoke sensitivity criteria as photoelectric smoke alarms they would fail.**<sup>12</sup>

**Q. Why did the ABCB Block Revising the Standard?**

The ABCB has blocked the adoption of the revised Australian Standard 3786 for inclusion in the 2007 Building Code of Australia (BCA).

The blocking of this amendment disregards the abundance of research and proposals by numerous authorities confirming the serious performance limitations of ionization smoke alarms. It ignores research and recommendations proposed by:

- Australian Fire Brigades,
- the Victoria University of Technology (commissioned by the AFAC),
- Australian Standards FP2 Committee and,
- commentary on international research by Deputy Chief Joseph E Fleming of the Boston Fire Brigade (USA).



## A. The 2004 NIST Report

The Foundation has been notified that an ABCB employee used information from a recent US National Institute of Standards and Technologies (NIST) Report<sup>(13)</sup> to justify the blocking of the amendment to AS3786 (NIST Performance of Home Smoke Alarms, Technical Note 1455, 07/2004).

The Report's Summary states: **"Smoke alarms of either the ionization type or the photoelectric type consistently provided positive escape times."** (Summary - Page 253, para 3)

NIST's website contains the following quote: "The Report concluded that, despite their differences, the placement of **either alarm type** on every level of the house **provided the necessary escape time** for the different types of fires examined."

[www.nist.gov/public\\_affairs/releases/smoke\\_detectors.htm](http://www.nist.gov/public_affairs/releases/smoke_detectors.htm)

### 2004 NIST Report - Conclusions Contradicted

The NIST Report's conclusions are **contradicted by their own data contained within the report**. These misleading conclusions have been engaged by several Fire Brigades and other international organisations in Australia and New Zealand (and internationally) to justify the sustained use of ionization smoke alarms and the failure to warn the public of their inherent dangers in residential applications.

### 2004 NIST Report - Exposed

It appears the ABCB employee was unaware that the 2004 NIST Report he used to justify the blocking of the proposed amendment was recognised as flawed with misleading conclusions. Several organisations repudiated these misleading conclusions:

- Australasian Fire Authorities Council,
- Australian Standards Fire Protection Committee FP2,
- Fire Protection Association Australia,
- NSW Fire Brigade - Commissioner Greg Mullins,<sup>(14)</sup>
- New Zealand Safety Council, and the
- Victoria University of Technology.

Chief Joseph Fleming, as a recognised world authority on smoke alarm research, has assisted the Australian Fire Brigades, the AFAC and the Australian Standards Committee FP2 in substantiating that **NIST's 2004 Report's conclusions are contradicted by their own data contained within their report**.

In his recent paper, *NIST Home Smoke Alarm Tests (10/2006)*, Chief Fleming reveals that in vast majority of tests conducted and referenced in the NIST Report that **"...the ionization alarm did not provide adequate time in almost all of the smouldering [fire] tests."**

These findings clearly contradict the NIST Report's concluding statements supporting ionization alarms. Chief Fleming's papers, *Photoelectric & Ionization Detectors - A Review of the Literature - Revisited (2004)* and *NIST Home Smoke Alarm Tests (10/2006)* are at: [www.TheWorldFireSafetyFoundation.org/theevidence](http://www.TheWorldFireSafetyFoundation.org/theevidence)

### ABCB - Duty of Care

A written contract is a legal document once it is signed, but it can be rendered void if it is discovered that the contract was based on misrepresentation or falsified information.

Unless otherwise refuted by a specific State or Territory, a Standard effectively becomes law when it is adopted by reference in the Building Code of Australia.

The question posed is what if it is discovered that a particular Standard is based on inadequate testing criteria that ultimately endangers lives?

If this was the case, should the ABCB have a duty of care to immediately adopt an amendment to the Standard that rectifies the problem?

The answer is a resounding "Yes".

### ABCB - Litigious Exposure

In blocking the amendment to AS3786, the ABCB is potentially exposed to litigation if any deaths or injuries in residential dwellings are attributed to the failure of an ionization smoke alarm to provide a timely warning. This may apply where those smoke alarms were installed in new homes from 01 May 2007, the effective date of the BCA 2007.

Multiple lawsuits or class actions against the ABCB may ensue if the relatives of victims discern that the ABCB blocked the introduction of an amended Standard that would have significantly reduced the risk of death or injury to those victims. Please read this document:

[www.FireCrusade.com/pdfs/HideACrimeCommitACrime.pdf](http://www.FireCrusade.com/pdfs/HideACrimeCommitACrime.pdf)

The Australian Standards FP2 Committee is a group of appointed technical experts whose competency and duty is to create and amend Australian Fire Protection Standards. This Committee, has acknowledged the serious, life-threatening limitations of ionization alarms by mandating the use of photoelectric technology in residential applications. In this case, the failure of the ABCB to act on the advice of these experts could be deemed a criminal act of negligence.

### Mandating Photoelectric Alarms

The Australian Standards Fire Protection Committee FP2 has now revised AS3786 which sets the testing criteria for smoke alarms. When the ABCB incorporates this revised Standard into the Building Code of Australia, photoelectric smoke alarms will be effectively mandated in all new Australian homes because ionization alarms will fail to pass the testing criteria of the new Standard.

However, once the Standard finally becomes part of the BCA, it will **ONLY APPLY TO NEW HOMES**.

This means that when the Standard is finally enacted, most existing Australian homes will still contain ionization smoke alarms - a 'life-saving' safety device that is **'not fit for purpose'**.

After watching the Foundation's films and examining this report, consider this question. If you became aware of what may be deemed negligent action by the ABCB in blocking the adoption of the amendment to AS3786, **would YOU sue** if:

- a member of YOUR family was injured or died after your ionization alarm/s failed to sound a timely warning and
- you subsequently discovered ionization alarms were dangerous and
- the truth had been kept from the public by those entrusted to protect you?

### Fire Brigades - Investigations & Position

In September 2004, the Foundation requested senior management from the Australian Fire Brigades' to thoroughly investigate ionization alarms. After viewing *Stop the Children Burning*, and a basic assessment, the Fire Brigades committed to conduct scientific testing.

This investigation involved analyzing numerous



scientific papers and commissioning the Victoria University of Technology (VUT) to undertake research.

Based on independent research, the VUT Report and concurrent research initiated by Australian Standards Committee FP2, the Australasian Fire Brigades have dismissed the traditional policy and politics of advocating ionization alarms by promoting photoelectric. These Fire Brigades have displayed great courage and integrity.<sup>14</sup>

On 01 June 2006, AFAC released their document: *Position on Smoke Alarms in Residential Accommodation*. This states (Page 3, Para 1):<sup>(1)</sup>

**"That all residential accommodation be fitted with photo-electric smoke alarms."**

The World Fire Safety Foundation endorses the Australasian Fire Authority Council's Position Statement. The AFAC's Position Statement is available at: [www.TheWorldFireSafetyFoundation.org/afac](http://www.TheWorldFireSafetyFoundation.org/afac)

#### ABCB - Reflecting Public Expectation

Given that the ABCB's mandate is to introduce and maintain legislation that reflects the 'public expectation of safety', please advise the World Fire Safety Foundation in writing by Tuesday, 20 March 2007 as to:

- 1) The reasons for the ABCB blocking the introduction of the proposed June 2006 amendment to rectify AS3786, despite the scientifically proven, life-threatening limitations of ionization smoke alarms?
- 2) The reasons for the ABCB's failure to discharge its Duty of Care by not informing the public of the known and scientifically proven, life-threatening limitations of ionization smoke alarms?

**While the wheels of bureaucracy continue to turn so slowly the needless loss of life continues.**

#### To: All Recipients

Please watch the Foundation's films<sup>(15)</sup> and examine this Report so you may evaluate the safety, legal and moral implications of this issue for your family and your business/organisation.

#### To: ABCB Staff and Board Members

We ask that you personally, and the ABCB collectively, help save lives by creating a means to ensure the incorporation of the proposed June 2006 amendment to AS3786 into the Building Code of Australia as soon as possible.

#### The Foundation's Objectives are:

- 1) To facilitate the mandate for photoelectric smoke alarms in all residential applications globally.
- 2) To ban the sale of ionization-only<sup>(16)</sup> smoke alarms for residential applications.

#### Our Mutual Objectives - A Safer Future

Because this information has been hidden for over 30 years, the public are deprived of an informed choice in properly protecting their families from fire.

When ionization smoke alarms are finally eliminated from homes, effective and affordable photoelectric smoke alarms will fill the void saving countless lives around the world.

**EVIL PERSISTS WHEN GOOD MEN DO NOTHING!**

### "A Positive Evil"

**"The point about [ionization] smoke detectors is that they are not 'neutral'; they are a positive evil because they prevent people from doing what's necessary to make their homes safe."**

Edward M Swartz  
Trial lawyer, Swartz & Swartz, Massachusetts, USA

**"... Fetterly argued that the company marketed the inferior [ionization] smoke alarm - selling 100 million of them - without warning the public about the differences in the two, forcing consumers to make an uninformed choice between savings and safety."**

James Fetterly  
World's #1 Fire Industry Litigator, Minnesota, U.S.A.

**"Continuing to endorse the ionization devices on any ground is to reward ethically bankrupt manufacturers and to collude with their deceitful reassurances."**

Kerrin R Edwards, M.A.  
Senior Consultant in Business Ethics, NSW, Australia

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



- 1 The Australasian Fire Authorities Council (AFAC) is the peak representative body for all Australian and New Zealand Fire Brigades. Their document *Position on Smoke Alarms in Residential Accommodation* (01 June 2006) is available at: [www.TheWorldFireSafetyFoundation.org/afac](http://www.TheWorldFireSafetyFoundation.org/afac)
- 2 Statement by Edward M Swartz, Trial lawyer of Swartz & Swartz, (MA USA) in the 1985 law suit when US\$2.8M was awarded against US retailer Sears & Roebuck in regard to a house fire that killed three boys and seriously injured their sister. The July 1985 edition of *Lawyers Alert Magazine* contained several quotes that included: "A malfunctioning smoke detector can create an unreasonable risk of harm in that the inhabitants of a [house] who rely on such an alarm may be lulled into an unjustified sense of safety and fail to be forewarned of the existence of a fire."
- 3 <http://SmokeAlarm.nist.gov>
- 4 [www.TheWorldFireSafetyFoundation.org](http://www.TheWorldFireSafetyFoundation.org)
- 5 The September 1980 issue of the *International Fire Chief* contained the landmark IAFC *Residential Smoke Alarm Report* and is available at: [www.WorldFireSafetyFoundation.org/docs](http://www.WorldFireSafetyFoundation.org/docs)
- 6 Stated by Trial lawyer, Edward M Swartz, *Lawyers Alert Magazine*, July 1985.
- 7 A 'smouldering' fire occurs when a fire emits smoke but has not yet broken into flame. A 'flaming' fire occurs when a fire, which will be often initially a smouldering fire, has broken into flames.
- 8 The Foundation believes that the optimum fire detection device is a combination heat/photoelectric alarm, despite that it is not yet commonly available for homes. In their *Residential Smoke Alarm Report* (09/1980) the International Association of Fire Chiefs stated: "The Subcommittee ... does not think the combination [ionization/photoelectric] detector is best." Residential Home Smoke Alarm Report, 09/1980, Appendix B, Page 6, Para. 2 at: [www.TheWorldFireSafetyFoundation.org/iafc](http://www.TheWorldFireSafetyFoundation.org/iafc)
- 9 The media release by the New Zealand Consumer's Institute - *Common Smoke Alarms Give Inadequate Warning* 02 June 2006 [www.consumer.org.nz/newsitem.asp?docid=2611&category=News&topic=Media%20release%20-%20Some%20smoke%20alarms%20inadequate](http://www.consumer.org.nz/newsitem.asp?docid=2611&category=News&topic=Media%20release%20-%20Some%20smoke%20alarms%20inadequate)
- 10 **The Mercer Case (04/1998)**

A statement by the Hon. David E Schoenthaler as he awarded US\$12.5M in punitive damages against an ionization smoke alarm manufacturer in the precedent-setting Mercer case (04/1998) when an ionization alarm failed to sound a timely warning: it entailed the death of Bradley Mercer and severe burns to his brother.

In January 2000, Canadian Television aired an award-winning documentary exposing ionisation alarms and elaborating the Mercer case. *Silent Alarms* stated that Judge Schoenthaler had found that the smoke alarm manufacturer had **"...done more than ignore the problems with its detectors, it actually covered them up. In the Judges decision he concluded that even though [the manufacturer] knew that their [ionization detectors] were flawed, despite that knowledge [the manufacturer] failed to disclose the known limitations of the [detector] to consumers."** Note: In 2001, after an appeal, the Mercer case settled out of court with a confidentiality order. [www.TheWorldFireSafetyFoundation.org/mercercase](http://www.TheWorldFireSafetyFoundation.org/mercercase)

**The Hackert Case (04/2006)**

The same manufacturer failed to shield their culpability from public view in April 2006 after two people died in Rotterdam, New York. That case was described as "...one of a handful of an apparently growing number of cases where a manufacturer of smoke alarms is **found liable for selling a perfectly legal, properly functioning\*, Underwriters Laboratory-approved product.\*\***"

Litigator James E Hacker (Hacker & Murphy LLP) uncovered "...750 complaints from consumers whose ionization type detectors failed to sound during smoke or fire events.\*\*" Hacker commented "We like to think this is a significant case ... it is a story that needs telling ... **it is unconscionable for a company to continue to market an inferior product.\*\*\***"

In his *Memorandum Decision & Order* (08 Nov 06) Judge Hurd wrote: "... the jury determined the design of defendant's ionization smoke detector was defective and **the defendant was negligent in failing to use ordinary care in the design, testing, marketing and sale of the alarm.**"

\* In this context "properly functioning" refers to a smoke alarm with a functioning (i.e. charged) battery, - this does NOT refer to, or imply, that ionization smoke alarms function properly as they do NOT detect common, life-threatening smouldering fires in a timely manner.

\*\* *New York Law Journal* 5/8/06 Volume 235 - Westlaw NYLJ, 1, (col. 6), Page 1, Para. 2.

\*\*\* *Colorado Fire Journal* 5/1/06 Issue 2006-19, Page 18

[www.ColoradoFireChiefs.org/data/DFS\\_Info/2006\\_DFS/Fire%20Safety%20News%20050106.pdf](http://www.ColoradoFireChiefs.org/data/DFS_Info/2006_DFS/Fire%20Safety%20News%20050106.pdf)

Note: More information on these cases and other litigation is on Page 13. [www.TheWorldFireSafetyFoundation.org/hackertcase](http://www.TheWorldFireSafetyFoundation.org/hackertcase)
- 11 "...such statements, **without further qualification**, could be deemed criminal acts of negligence". In the landmark 1998 Mercer case Judge David E Schoenthaler awarded US\$12.5 in punitive damages because the manufacturer "...failed to disclose the known limitations of the [ionization detector] to consumers." (see 10 above)
- 12 The Washington Post article *How Safe are Products Bearing the UL Mark* exposes the problem with global standards testing and is available at: [www.TheWorldFireSafetyFoundation.org/ul](http://www.TheWorldFireSafetyFoundation.org/ul) The Foundation's letters to Underwriters Laboratories (the world's largest standards testing laboratory) regarding inadequate smoke alarm testing requirements are available at: [www.TheWorldFireSafetyFoundation.org/ulletters](http://www.TheWorldFireSafetyFoundation.org/ulletters).
- In September 2006, acceptance criteria inadequacies with the Australian smoke alarm Standard were made public in the Foundation's film, 'SmokeAlarmRecall' at: [www.TheWorldFireSafetyFoundation.org](http://www.TheWorldFireSafetyFoundation.org)
- 13 NIST's report, *Performance of Home Smoke Alarms* (Technical Note 1455, 07/2004) is at: <http://smokealarm.nist.gov/HSAT.pdf>
- 14 Commissioner Greg Mullins AFSM, Chief Fire Officer and CEO of the NSW Fire Brigade wrote in his August 2006 letter to the WFSF: "As you are aware, the New South Wales Fire Brigades (NSWFB) has spent a great deal of time analyzing the research and findings of a wide range of investigations including the NIST Report (Technical Note 1455), the White Paper (The Public/Private Fire Safety Council), papers by Joseph Fleming and others. Your assistance in this respect was greatly appreciated. The result of this investigation was amendment of the "NSWFB Position on Smoke Alarms" **to strongly recommend the installation of photoelectric alarms in all homes. I have publicly advocated this in numerous radio, TV and newspaper interviews, and ensured that all NSWFB firefighters are aware of, and communicate, this position.** As you are also aware, the NSWFB worked very closely with the Australasian Fire Authorities Council (AFAC) in amending the AFAC Position on Smoke Alarms to reflect the same position." [emphasis added]
- 15 'Smoke Alarm Recall' (formerly 'The Aquarium Test') is at: [www.TheWorldFireSafetyFoundation.org](http://www.TheWorldFireSafetyFoundation.org)
- 'Stop the Children Burning' is at: [www.TheWorldFireSafetyFoundation.org/stcb](http://www.TheWorldFireSafetyFoundation.org/stcb)
- 16 The Phrase 'Ionization-only' refers to single station smoke alarms as opposed to dual/combination alarms that utilize both ionization and photoelectric technology. In reference to these dual alarms, the AFAC concurred with the IAFC's *1980 Smoke Alarm Report* and declared: "Smoke alarms fitted with dual photoelectric/ionization detectors are available ... however they are more costly and prone to more false alarms ... and the benefits are marginal." (Position on Smoke Alarms in Residential Accommodation, 06/2006, Page 3, Note 6.) [www.TheWorldFireSafetyFoundation.org/afac](http://www.TheWorldFireSafetyFoundation.org/afac)



The following is a list of some (US) smoke detector cases. The World Fire Safety Foundation does not make any claims or representations regarding this list which has been provided to assist your legal counsel in researching and advising you with regards to this issue.

Tania Douglas v. Tropical Construction, et al
Civil District Court, Parish of Orleans, Louisiana
Court File No. 89-20015 Year: 1989

Janien Howell v. Pittway, et al
County of the Bronx, Supreme Court, New York
Court File No. 8093-1990 Year: 1990

Deborah Mercadel v. BRK, et al
Civil District Court for the Parish of Orleans, Louisiana
Court File No. 91-7952 Year: 1991

Coy Carruth v. Pittway, et al
Blount County Circuit Court, Alabama
Court File No. CV-91-085 Year: 1991

Sandra Grywalski v. Kuykendall, et al
Oklahoma County District Court, Oklahoma
Court File No. 92-4994-67 Year: 1992

Carlos Reyna, Jr., et al v. Pittway, et al
County of Hidalgo, Texas
Court File No. C-1259-92-F Year: 1992

Betty Davis, et al v. Pittway, et al
Etowah County Circuit Court, Alabama
Court File No. CV-93-089 Year: 1993

Charles Miller v. BRK, et al
5th Judicial District Circuit Court, Lake County, Florida
Court File No. 94-12479 Year: 1994

Sharon Neal, et al v. First Alert, et al
U.S. District Court, Alabama
Court File No. 95-A-631 Year: 1995

Joyce Goldsmith v. Pittway, et al
Mobile County Circuit Court, Alabama
Court File No. CV-95-3010 Year: 1995

Marie Rhodes, et al v. First Alert, et al
Clark County District Court, Nevada
Court File No. A 343272 Year: 1996

Nathan Mercer v. Pittway, et al
Scott County District Court, Iowa
Court File No. 89732 Year: 1996
See '9' in References (page 11)

Carlos Aleman, et al v. BRK
117th Judicial District, Nueces County, Texas
Court File No. 96-4324-B Year: 1996

Lois Giorgi, et al v. First Alert, et al
Wayne County District Court, Michigan
Court File No. 96-618-826 NP Year: 1996

Patti Hatfield v. BRK Brands, et al
City of Richmond Circuit Court, Virginia
Court File No. LE-124-3 Year: 1998

Timothy and Mary Gordon v. BRK
St. Louis, Missouri
Year: 1989 (see note below\*)

Ashley Lawhorn, et al v. Jameson Home Products, et al
Cumberland County Circuit Court, Tennessee
Court File No. Cv003153 Year: 2001

Shelia & John Hackert vs First Alert Inc and BRK Brands Inc
U.S. District Court, Northern District of New York
Court File No. 1:03-CV-215 Year: 2006
See '9' in References (page 11)

\*NOTE:

The court file number for the Gordon vs BRK case was not available at the time of distribution of this report. With regard to this case, it was stated in the award-winning Canadian documentary Silent Alarms that "In July of this year a jury awarded Timothy and Mary Gordon US\$50M because two of their children died when their [manufacturer] detector failed to warn them of a fire. And though the money being handed out is impressive the information being revealed in these trials is even more interesting..."

www.TheWorldFireSafetyFoundation.org/lawyers

Jury Awards Family \$21.3 Million in Smoke Detector Lawsuit

"Fetterly said the ionization smoke detector the couple purchased was defective and dangerous. ...the company marketed the inferior model, selling 100 million of them, without warning the public about the differences in the two, forcing consumers to make an unformed choice between savings and safety."

Quoted from the Quad-City Times 02/1998 after James Fetterly of Robins, Kaplan, Miller & Ciresi LLP, won \$12.3M in punitive damages in the landmark Mercer Case. The manufacturer settled out of court with a confidentiality order. In April 2006, Mr Fetterly, together with New York Lawyer James Hacker of Hacker & Murphy LLP, won punitive damages against the same manufacturer when further deaths resulted after ionization detectors failed to sound a timely warning.

Note: Punitive damages are rarely awarded in a product liability case in the State of New York.

The Changing Landscape of Liability

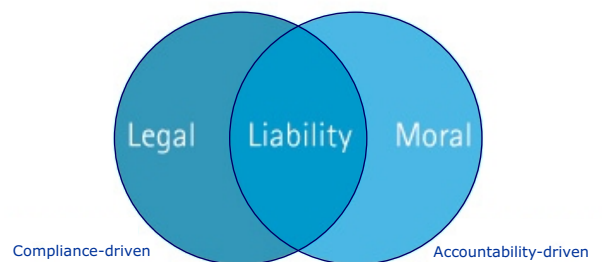
A Director's Guide to Trends in Corporate Environmental, Social and Economic Liability

Legal and moral liability are converging. This document, published by international consultancy organisation, 'SustainAbility' examines the growing risk companies face from 'Moral Liability', and:

- society's expectations of business behaviour is rapidly shifting,
- organisations are being punished, not only in courts of law, but also in the global court of public opinion, and
- responsible business and shifts in societal expectations are forcing companies to adopt new business models "in relation to accountability for past actions."

The document is available at: www.SustainAbility.com/insight/liability.asp

Legal and moral liability are converging



From the Executive Summary - (page 4)



**AUSTRALIA** On 21 February 2007, The CAN Report was sent by registered mail to the following Australian addresses:

## AUSTRALIAN BUILDING CODES BOARD

### Senior Staff/Management

- Ivan Donaldson** General Manager - Australian Building Codes Board. GPO Box 9839, Canberra, ACT 2601.  
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- Roy Ormerod** General Manager - Building Standards and Regulation, Workplace Standards of Tasmania, Dept of Justice. PO Box 56, Rosny Park, Tasmania 7018. [Roy.Ormerod@Justice.tas.gov.au](mailto:Roy.Ormerod@Justice.tas.gov.au) Ph: +61 3 6233 7657
- Tony Arnel** Commissioner - The Building Commission of Victoria. Level 27, Casselden Place, 2 Lonsdale Street, Melbourne, VIC 3000.  
[Commissioner@BuildingCommission.com.au](mailto:Commissioner@BuildingCommission.com.au) Ph: +61 3 9285 6400
- Nabil Yazdani** Manager - Building Codes and Regulation Branch, Building Industry Development, Depart. of Housing and Works, 108 Adelaide Terrace, East Perth, WA 6004. [Nabil.Yazdani@DHW.wa.gov.au](mailto:Nabil.Yazdani@DHW.wa.gov.au) Ph: +61 8 9222 8144

### Board Members

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[AGibbs@HuxleyHomes.com.au](mailto:AGibbs@HuxleyHomes.com.au) Ph: +61 2 9842 9888
- Tony Arnel** (Victorian Rep - see above)
- Rod Applegate** Executive Director - Lands and Planning, Dept of Planning and Infrastructure. GPO Box 1680, Darwin, NT 0801.  
[Rod.Applegate@nt.gov.au](mailto:Rod.Applegate@nt.gov.au) Ph: +61 8 8999 5511 (Northern Territory Rep)
- Maria Atkinson** Global Head of Sustainability - Lend Lease Communities & Retail. The Bond, 30 Hickson Road, Millers Point, NSW 2000. Locked Bag 1, Millers Point, NSW 2000. [Maria.Atkinson@lendlease.com.au](mailto:Maria.Atkinson@lendlease.com.au) Ph: +61 2 9236 6111 (Industry Rep)
- John Chandler** Councillor - City of Stonnington. Rockley Rd, South Yarra, VIC 314, PO Box 21, Prahan, VIC 3181.  
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