

America's Deadliest Cover-Up Exposed!

“It was a scam, a fraud ... the small children have paid a horrible price ... The story of this deadly operation is told below...” *Richard M Patton, FPE*

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THE CRUSADE AGAINST FIRE DEATHS INC.



Richard M Patton
Crusade Founder
Fire Protection Engineer



Fighting To Protect You And Your Family

Patton's 'Crusade Against Fire Deaths Inc.' started in 1976 when he sent 3,000 'Smoke Alarm Fraud' reports to Fire Chiefs and fire Engineers across the USA.

Patton's relentless 30 year fire industry Crusade was the inspiration behind the new documentary 'Stop The Children Burning' (see back page for more).

For more information visit our web site at: www.FireCrusade.com

AMERICA'S DEADLIEST COVER-UP EXPOSED

“A smoke detector that sounds approximately 19 minutes after smoke reached its sensing chamber is like an airbag that does not deploy until 19 minutes after a car accident.”

...as quoted by US Judge, Hon. David E. Schoenthaler in his summation when awarding punitive damages in the 1998 US landmark Mercer case. Ionization smoke alarms (the type found in most homes globally) failed to give a timely warning resulting in the death of Bradley Mercer and the scarring for life of his brother Travis.

For four decades a ‘phony’ smoke detector has been marketed into homes with the assumption that when fire threatened it would warn in time to for those endangered to escape unharmed. It was a scam, a fraud and especially the small children have paid a horrible price.

The fraudulent fire detector was first introduced as a ‘products of combustion’ detector during the 1960s. Later it was renamed a ‘smoke detector’ which it never was. The story of this deadly operation is told below...

JOE JOHNSON'S MAGICAL FIRE DETECTOR

During the mid 1960s I attended a presentation by Joseph E. Johnson, the President of Pyrotronics, Inc. Joe Johnson was lecturing on the merits of a strange new fire detector being marketed by Pyrotronics.

A few years later Johnson authored an article that appeared in the February, 1969 *Fire Technology* publication of the Society of Fire Protection Engineers (SFPE). In the published report Johnson essentially repeated the story he told some time earlier. I provide extracts from that published report below.

“This type of system is generally called an early warning system or products of combustion system. ... It is the ionization detector, however, that has excited the interest of the fire protection engineer by its capability of detecting incipient fires prior to the appearance of flame, smoke, or appreciable heat.

This capacity makes it possible to provide the earliest possible response to a fire condition. ... Ionization chambers have been used in laboratory for many years to detect the presence of extremely small particles.

The nitrogen and oxygen molecules of air within the ionization chamber are ionized by the bombardment of alpha particles from the radioactive material. ... The conclusion reached, therefore, is that the combustion particles that we desire to detect with an ionization detector disperse from the point of origin of the thermal decomposition as would a gas.”

The Johnson article contained a drawing showing the *Four stages of fire* (Figure 1). The first or ‘Incipient Stage’ was described as follows:

“invisible products of combustion given off. No visible smoke, flame or appreciable heats yet present... Only combustion gas detectors can warn here.”
(Emphasis added)

PIE-IN-THE-SKY SCIENCE

The gist of what Johnson was claiming is that when a combustible material is *heated*, but not yet at a temperature high enough for smoldering or flaming to occur, that heated material will emit tiny, near atomic sized ionized particles. These particles are so small that they will spread throughout a container (house) in accordance with the “gas laws”.

This is what he was saying. Whereas smoke may remain largely within the area where it is generated and even stratify at the lower level of a room, at least during the early stage of a fire, ***a gas (such as carbon monoxide) will soon spread uniformly throughout a container (home). In other words, the concentration of a gas becomes equal throughout the entire container (home).***

The point of this claim was that when a combustible (i.e. any substance that is able to be burned) becomes heated, these microscopic particles that are emitted will spread throughout the home of their own volition; ***therefore the particle will seek and find the ionization device, no matter where it is located.*** Accordingly, one ionization products of combustion device in the center of a one story home, or at the top of the stairs in a two story home, ***would be sufficient to protect an entire home.***

To understand the early marketing scheme for this new and incredible device, one must realize that a single ionization type device was being touted to being better protection than an entire conventional fire detection system with a detector located in every room of the home.

JOE JOHNSON'S FIRE CURVE

Within the article written by Joe Johnson that was published in the February, 1969 issue of the *SFPE Fire Technology*, Mr. Johnson included a ‘fire curve’ that supposedly represented the growth of a typical fire.

By 1969 Johnson’s Fire Curve was a widely distributed promotional item for selling the ionization device. The curve was titled: **Four stages of fire** (Figure 1.). The four stages described in Johnson’s Curve are as follows:

1. INCIPIENT STAGE:

Invisible products of combustion given off. No visible smoke, flame or appreciable heat yet present.

2. SMOLDERING STAGE:

Combustion products now visible as smoke. Flame or appreciable heat still not present.

3. FLAME STAGE:

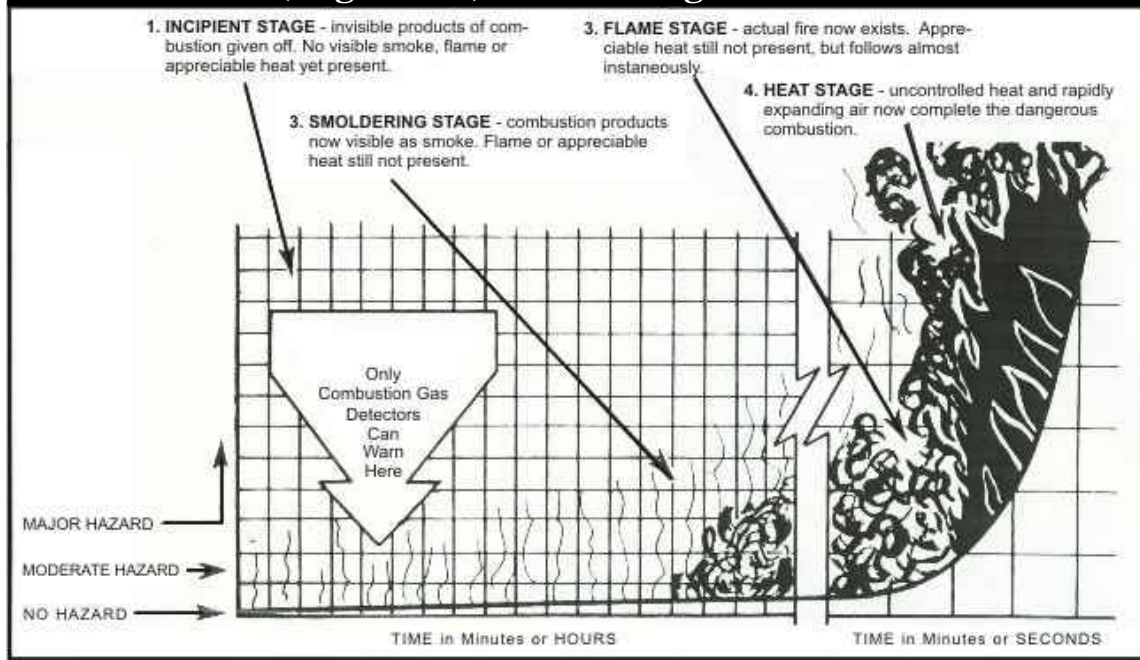
Actual fire now exists. Appreciable heat still not present, but follows almost instantaneously.

4. HEAT STAGE:

Uncontrolled heat and rapidly expanding air now completes the dangerous combination.

An arrow located above the **INCIPIENT STAGE** read as follows: **“ONLY combustion gas detectors can warn here”**

(Figure 1.) Four Stages of fire



The intents of that curve are clear. To begin with, Johnson refers to those mysterious ionized particles that are emitted from a combustible *before* “appreciable heat” occurs as “combustion gas”. Then he claims they spread throughout a home “in accordance with the gas laws”. Hence a warning occurs *before* the smoke appears. This implies that the ion detector will warn *well before* a conventional smoke detector (photoelectric type) will be able to detect smoke.

The third stage is the **FLAME STAGE**. But, it is noted that “appreciable heat still not present”. The message here is that although the fire has morphed to the flame stage *there is still insufficient heat to operate a heat detect or a fire sprinkler head*.

Finally, the fourth and final stage, **HEAT STAGE**, shows a well advanced fire with uncontrolled heat. The message: Yes the heat detector (sprinkler) will finally sound here, but it is far too late, as lives may have already been lost.

So Johnson portrays the growth of fire in a manner where *only* the ionization type products of combustion detector will provide a high level of fire safety, and *one* ionization *products of combustion detector* within the home will do it.

Of course, after the ion device becomes the one and only “best protection”, there will be time enough to add more detectors within a home.

PERFORMANCE CLAIMS IMPLY PROTECTION WILL BE ECONOMICAL

These claims by the president of Pyrotronics clearly implied that a moderately heated combustible will emit minute particles that are so small that they will spread throughout a closed container in accordance with the gas laws; meaning that while smoke may initially remain localized and may even stratify at the lower levels of a room, gas (and Johnson's particles) will rapidly spread to uniformly fill the container (entire house).

This theoretical ability to rapidly spread throughout a home

was soon used to justify protecting an entire home with *one* detector. It was claimed by other ion detector manufacturers that the particles would spread rapidly and *find* the detector. The theory that the ionized particles that supposedly are emitted from a heated (not yet smoldering or burning) combustible, and that they will rapidly distribute themselves throughout a container to ‘find’ the detector, may possibly have had some pertinence to laboratory experiments. However, it has been proven that no such phenomenon has relevance within the real world of fire.

THE TRUTH

If we accept the fire curve and the stage designations as Johnson defined them, we need to think again, the following is how the detectors will *actually* perform.

1. INCIPIENT STAGE:

None of the fire detectors presently marketed for home protection will warn during this stage, especially the ionization device - Johnson's claim that ions would warn at this stage is pie-in-the-sky science.

2. SMOLDERING STAGE:

Only the photoelectric smoke detector (NOT the ionization detector) will sound when the fire is a true smoldering fire.

Fire testing and field experience has proved the ionization device to fail at detecting smoldering fires in a timely manner.

3. FLAME STAGE:

All three types of fire detectors may sound here. But, both ‘smoke’ detectors have serious limitations. Many fires that initiate flaming produce little or no *visible* smoke; therefore the photoelectric detector may not sound early. Eventually, when the fire grows large and there is a shortage of oxygen, smoke will be produced.

Black smoke is a poor reflector of light and therefore this

type of smoke can create detection problems for photoelectric alarms.

Whereas the ionization device sometimes is fast to detect a hot fire, decades of testing revealed it to be a very erratic and unreliable detector. The ionization device, when tested at Underwriters Laboratories (UL) is not required to sound *until the smoke significantly exceeds the safe exiting level*. Grease or other deposits, which can contaminate the smoke alarm chamber can cause both smoke detectors to become unreliable.

The heat detector is by far the most reliable detector for the flaming fire and it has a very long reliable life.

4. HEAT STAGE:

The heat stage illustrated by Johnson's curve represents a well advanced, dangerous fire. The heat detector will sound well before the fire becomes this extreme. If either of the two 'smoke detectors' has not yet sounded, the heat is likely to have destroyed them.

The ability of the ionization type detector to warn of fire begins, with few exceptions, when the fire is flaming and provided the combustion products enter the detection chamber *before* the near atomic size particles bind together to become large particles. For the smoldering (smokey) fire, only the photoelectric smoke detector is satisfactory.

For the flaming fire the heat detector is by far the more reliable device. The ionization 'products of combustion' detector is extremely unreliable and an endangerment to the public.

OTHER PERFORMANCE DECEPTIONS

A whole scenario of performance misrepresentations were advertised and promoted in publications going to fire chiefs including the National Fire Protection Association (NFPA) publications. It was common practice for manufacturers of the ionization devices to advertise these false performance claims:

1. The heat detector, which was already the primary fire detector within the adopted code, would be so slow to operate that the smoke would kill before the detector sounded.
2. Approximately 75 percent of all fires started out as smoldering fires.
3. Therefore, nearly all fire deaths were caused by smoldering (not flaming) fires.

Most fire deaths are the result of flaming fires, not smoldering fires, because the flaming fire will create deadly combustion gases up to a thousand times the rate of a smoldering fire. And a high percentage of fire victims also suffer heat inflicted injuries

FIRE ENGINEERS FAILED TO CORRECT THE FALSE CLAIMS

Within most fields of engineering, a pie-in-the-sky theory of fire detection capability, as postulated by Joe Johnson, would have been challenged.

Dedicated fire engineers and fire officials would have installed the ionization device in a room and then heated some combustibles of various types to high temperature until the material first smoldered and then flamed, noting when the ion device sounded. Would it have sounded *before* smoke could be seen? Of course not.

Then they would have placed a lit cigarette on bedding to determine how long the smoldering continued without the device sounding. They would have discovered that the device is just about useless for warning of a smoldering fire. They would then have installed an ion detector at the top of the stairway and determined if a fire, in say a downstairs den, would have produced untenable smoke conditions blocking the path to the exit door *before* the ion device sounded.

Yes, an honest and concerned fire regulatory system would have promptly proven that Joe Johnson's theory of how an ion device performs was false. In 1976 I distributed 3,000 'Smoke Alarm Fraud' reports to Engineers and Fire Chiefs throughout the USA.

These reports provided the documentary evidence to establish that the performance claims regarding ionization alarms were false. Despite this engineers were still reluctant (or afraid) to go against the NFPA/UL combine.

It appears that Joe Johnson knew something about the way the American fire regulatory system operates that most people do not - that he could promote a wild and crazy theory and get away with it!

DECEIVING THE FIRE OFFICIALS

The fallacious performance claims of Joe Johnson and the other ionization detector proponents were 'proven to be valid' by using a selected fire test that produced just the "right" combustion products needed to make it sound.

The demonstration fire was the 'perfect fire' to cause the device to sound promptly (usually within ten seconds). The favored test fire involved using crumpled up carbon paper in a waste paper basket. The basket was then placed within about five feet of the ion detector. Even though it was claimed these devices would detect fire *without* heat *during the pre-fire stage*, the demonstrations always involved a clean burning hot *flaming fire*.

This misleading demonstration was designed to lead fire officials into believing the device was incredibly fast and that it would warn of all stages of fire. Soon it was considered an almost magical fire detector.

FALSE PERFORMANCE CLAIMS

Because the ionization alarm could detect an invisible cloud of particles (a particulate) caused by a clean *flaming fire* consisting of particles too small to be visible to the human eye, they claimed it would detect fire "*before you can see or smell the smoke*".

Note that a particulate created by a *flaming fire*, that contained particles too small to be seen by the human eye, was not the same as those theoretical 'ions' that Johnson claimed were supposedly emitted even *before* the smoldering begins. And, the flaming fire combustion products also were not the same as the thick (large particulate) smoke created by a *smoldering fire*.

What was never revealed was that the device was a 'fast' detector *only* when the combustion products entering the detection chamber were 'just right' in size and number to trip the device. Of course, when the fire created 'invisible particulate' and the combustion products *immediately* entered the detection chamber *before* the small particles *agglomerated* (bound together) to become large (visible) particles, the device

appeared to be an excellent fire detector.

Unfortunately, both Underwriters' Laboratories (UL) and the National Fire Protection Association (NFPA) helped the smoke detector manufacturers deceive the fire department officials.

FEDERAL FIRE

TESTS ARE ALSO FALSIFIED

During the 1960s, Underwriters' Laboratories (UL) began 'certifying' the ionization detector as "reliable". However, the test program negotiated with the manufacturers was inadequate. There was no realistic testing for the ability of the device to warn of a *smoldering* fire (large particulate smoke).

And, when flaming fires were used the smoke obscuration (light reduction per foot) went well into the potentially deadly levels with the device 'passing' the test.

At the time, the results of the laboratory testing were revealing that the manufacturers' advertised performance claims were false. But no warnings to the consumer came from UL. Finally, during 1974, actual testing of the device with real fires in real homes was conducted (the Dunes Tests). The Federal Fire Engineer and the UL Fire Test Engineer were aware of the inadequate testing procedures at UL as evidenced by the extract from the 'Introduction' section of the Dunes Test Report:

During Phase 1 of these field tests, with the Federal Fire Engineer (monitoring the tests from Washington), and the UL Engineer as field manager, the average time from the initiation of a smoldering fire until the ionization device sounded exceeded one hour.

However for a period exceeding ten years, *before* the Dunes Tests, UL had been stamping their 'seal of approval' on the ionization detector, effectively certifying that the device would detect smoke from a house fire and warn occupants in sufficient time for them to safely escape.

Tragically, over 20 years later, in the year 2000, the courts would eventually describe the ionization device as "inherently dangerous" (Mercer vs BRK, 02/1998) because it lulled consumers into a false sense of security when the toast burnt yet failed to sound a timely warning in life-threatening fires. thousands of deaths and injuries occurred had already occurred. Prior to the Dunes Tests manufacturers were claiming that the ionization device *would sound before smoke could be seen. However* during the Dunes Tests dense and potentially deadly smoke frequently appeared long before the device sounded, if it sounded at all.

After the Phase 1 Tests were completed, the Federal Fire Engineer and the other field engineers were *required*, as professional engineers, to reveal this serious endangerment to the public. They did the opposite.

The Dunes Tests Phase 1 Report contained hundreds of pages of information and complex test data. The 'Conclusion' section on page 8 contained this **falsification of the truth**:

Government Report's Conclusions NOT Supported by Data Within Report

"In general all smoke detectors responded well to all fires."

**UNDERWRITERS LABORATORIES
Fraudulent Testing Exposed**

1976 UL Admit Tests are NOT Based on 'Real World' Fires

"At the present time, unfortunately, there is very little actual field data to back up the current standards, which seem to be chiefly based on laboratory experience and engineering judgement."

US National Institute of Standards & Technology (NIST, formerly National Bureau of Standards, NBS) 'Dunes Tests' Report #2, July 1976, Page 2, Para 1.

1978 UL's Smoke Alarm Testing Exposed

"... its [UL's] present test regime does not measure the alarm's ability to signal danger from a smoldering fire even though up to three quarters of all fires in the home begin that way."

'The Fiery Debate over Smoke Alarm Efficiency' Business Week Magazine Sept 1977. This story discussed the ion/photo debate and was the first article to expose UL's inadequate testing of smoke alarms.

Note: Richard M Patton, Fire-Protection Engineer was quoted in this article stating: "If Gillette and ADT succeed in squelching some competition and changing the UL test standards it will be poetic justice."

1999 Washington Post Exposes UL's Smoke Detector Testing

"While an alarm may sound in UL labs, it may not go off in a home..."

Joseph Fleming, Deputy Fire Chief Boston Fire Department and Boston Fire Marshall.

"All UL standards are developed to anticipate real world events ... if we don't anticipate everything ... we change our standard."

Deborah Rade, Senior Legal Counsel, Underwriters Laboratories.

Quotes are from the award-winning, Washington Post expose 'How Safe are Products Bearing the UL Mark?' at: www.WorldFireSafetyFoundation.org/docs

Note: April 2007. Despite assurances to rectify the problem, UL has NOT changed its standard. UL continues to profit by effectively certifying ionization alarms with defective testing thereby endangering lives.

2006 Australia Discovers Flaws in Smoke Alarm Standard

"What we discovered as the Australian Standards Committee doing some enquiries into test data, to our horror, was that ionization smoke alarms are allowed to go to 50-60% [smoke] obscuration per metre ... dangerously high, totally unacceptable ... for thirty years this information has been kept from the public."

David Isaac, Australian Standards Committee Member, from the film 'The Aquarium Test' at: www.AquariumTest.org

Note: It has been alleged that the inadequate ionization smoke alarms testing procedures of Australian Standards is based upon UL's testing.

This conclusion was false. The data contained within the Dunes Report did NOT support this conclusion. The report's data confirmed that ionization detectors did NOT "respond well to all fires" - they FAILED to detect life-threatening smoldering fires in a timely manner.

The failure to warn the public of this fact has been described as a '[Crime Against Humanity](#).' The falsification of the Dunes tests conclusions enabled the continued sale of a dangerous device resulting in hundreds of thousands of needless deaths and injuries globally.

SENIOR GOVERNMENT OFFICIAL COVER-UP

The data developed during all 40 tests of the Dunes Tests, Phase 1 were fragmented and put in the rear of the report. The data was arranged so that any person desiring to review and analyze it would have to go through eleven sections to correlate the events of any one test. I believe that I was the *only* fire protection engineer to question the conclusions and discover what actually happened.

After spending weeks studying the data, I realized the above stated conclusion was a gross misrepresentation of the facts. The Dunes Tests report was a complex cover-up of the marketing of a defective and dangerous product into millions of homes.

The cover-up allowed Underwriters' Laboratories to avoid explaining the inadequacies of the laboratory testing and avoid being held liable for the thousands of deaths and injuries that had already occurred.

Falsifying the Dunes Tests conclusions kept the truth hidden from the public and all other organizations that had helped promote the device including but not limited to the International Association of Fire Chiefs (IAFC), National Bureau of Standards (NBS) and federal agencies in Washington.

Better that children should continue to burn than the bureaucratic blunders be revealed. **Saving face seemed more important than saving lives.**

DUNES TEST FALSIFICATION METHODOLOGY SPREADS WORLD WIDE

The Dunes Tests Report (i.e. 'Detector Sensitivity and Siting Requirements for Dwellings' PB-247 483) was issued as a research document of the National Bureau of Standards (NBS). NBS subsequently changed its name to the National Institute of Standards and Technology, (NIST). The UL fire test engineer who falsified the Dunes Tests conclusions subsequently left UL and began working at NBS. He has become a prominent federal 'expert' on fire detectors and provides biased information worldwide.

He is now signatory to critical smoke alarm testing research relied on by Fire Brigades around the world such as the 2003, NIST 'Performance of Home Smoke Alarms' Report which, like the Dunes contains falsified conclusions that are inconsistent with the data contained within the report. (The World Fire Safety Foundation letter to NIST addressing the falsification of the 2004 'Performance of Home Smoke Alarms' Report's conclusions is at:

www.WorldFireSafetyFoundation.org/docs)

REMOVING THE HEAT DETECTOR FROM THE CODE

Until the 1960s, the *heat detector* had a well deserved reputation as being the most reliable fire detector in existence. It had been the "trigger" for the fire sprinkler head which had performed for nearly 100 years with better than 99 percent reliability.

Fire deaths within sprinkler protected building had been almost non existent. However, in order to make the ionization device the only device required to protect a home, it was necessary to remove the heat detector from the existing fire code.

Therefore, the Dunes Tests were falsified to "prove" *heat detectors would operate only after the smoke had already killed*. This was accomplished by testing the heat detectors against smoldering (no heat) fires and flaming fires that were so small that the ceiling temperatures failed to reach the 135 degree (Fahrenheit) operating temperature of the heat detectors.

Then, during the Phase 2 Dunes Tests, finally *the heat detectors were tested against six high temperature flaming fires* (that clearly produced sufficient heat to operate the device). Incredibly, during five of these tests the heat detectors "failed to operate". I could not believe it. Something was wrong! Finally, I discovered the answer:

Heat Detectors Fraud

During five of the six fires the heat detectors were removed from the fire rooms before the fires were lit. Thus the testing was deliberately rigged to 'prove' heat detectors (and heat operated sprinkler systems) provided less safety than the ionization devices.

Information relating to falsification of US Government smoke alarm tests is available at: www.theCANreport.org

The falsified Dunes Tests conclusions have allowed the continued marketing of a *defective* 'smoke' detector. The heat detector was removed from the NFPA code as acceptable for protecting life in dwellings.

THE TIP OF THE ICEBERG

It is hard to believe that fire test results could have been deliberately rigged when human lives were at stake, however, documentary evidence clearly establishes this fact.

If testing was falsified for smoke alarms, what about other fire safety devices? Is the public at risk in any other areas relating to fire safety? As an engineer with more than 40 years in fire protection it is my view that UL and NFPA have been far more interested in profiteering from fire than reducing fire. I consider the fire codes to be riddled with inaccuracies and falsifications.

The ionization smoke alarm fraud is the tip of the iceberg. An example of other fire industry problems is the falsification of testing and corruption that has made residential fire

sprinklers unnecessarily costly in the US. However this is beyond the scope of this document. More information is available in my book, 'The American Home is a Fire Trap' and documents available at www.FireCrusade.com/docs

RELIABLE PROTECTION HAS BEEN KEPT OUT OF THE HOME

The ion device became the *only* fire safety device code required for homes. A multi billion dollar market was thus captured by one device that actually was a close to useless safety device.

And, because it was the promoted protection, *the public was denied reliable protection*. Before the end of the 1970s, it became obvious that *thousands* of deaths and injuries due to fires were occurring in "smoke detector protected" homes.

TWO KINDS OF 'SMOKE'

Almost everyone has witnessed an outdoor camp fire involving clean dry wood. With dry wood and plenty of fresh air the fire will seem to be burning without producing any smoke. Actually, there are plenty of combustion particles coming off the fire, but the burning wood and the oxygen are uniting so efficiently that the particles are too small to be seen.

That is the type of particulate that will activate the ionization device. Now take a pile of wet leaves and toss them on that clean burning fire. Suddenly thick visible smoke will rise up. That *real smoke* (visible particulate) is what the ionization type smoke detector will NOT detect. Sometimes the combustion products produced by a fire will have enough *large* particles to be visible and cause the *photoelectric* type (real) smoke detector to operate, and enough of the *near atomic sized* particles for the *ionization* device to sound.

However, this we know, when the fire is low grade and smoky the photoelectric type smoke detector is the *only* fire detector that will perform well. When the fire is flaming and hot the heat detector will perform to near perfection. When reliance is placed on the ionization device, the failure rate will exceed 50 percent based on available data.

Ionization Detectors - Legal Issues

"The marketing and/or promoting of the ionization type smoke detector, without full disclosure of its life-threatening limitations, is a crime."

Further information is available at: 'Hide A Crime Commit A Crime' www.FireCrusade.com/docs

The CAN Report
'Recommending, Selling or Installing Ionization Smoke Alarms A Criminal Act of Negligence'
www.theCANreport.org

To ensure that there is **sufficient** early warning, regardless of whether the fire initiates smoldering or flaming, **both a (true) smoke detector (i.e. the photoelectric) and a heat detector are essential.**

THE TRUTH SURFACES BUT IS PROMPTLY SUPPRESSED

After the Dunes Tests were completed and the marketing of the device continued, many fire officials were questioning the efficacy of the device. The extremely high death rate in "smoke detector protected" homes did not go unnoticed.

Finally, the California Fire Chiefs, with the support of the IAFC, conducted their own fire test program. Following the Cal Chiefs Test program, Chief John Gerard of the Los Angeles Fire Department who was in charge of the testing, confirmed that the ionization device consistently failed to perform in a manner satisfactory for protecting lives.

The device proved so unreliable that Chief Gerrard predicted it would have a 50 to 80 percent failure rate in the field (How correct he was!) However, the former UL test engineer (who had become an employee of NBS) was able to force the Los Angeles fire officials to 'bury' their Cal Chiefs Test report.

Three separate attempts to publish the Cal Chief's Test were all thwarted.

IAFC REPORT BURIED

By 1980 the IAFC had been helping to promote and sell ionization alarms since the mid 60s. In September of 1980 the IAFC's 'Residential Smoke Alarm Report' was published. This report was conducted by a sub-committee of the International Association of Fire Chiefs (IAFC). Chief Gerrard was one of the four members of the sub-committee. The report warned that "advertising and promotion (of ionization smoke alarms) is misleading the Fire Chiefs and the public." The report confirmed that the ionization device was flawed and was inadequate protection for homes and that the IAFC should not promote it.

Was the IAFC afraid of public reaction to the truth or was the Fire Chief's message lost due to the marketing muscle of the manufacturers? If the manufacturers used their marketing muscle in 1980 to keep the truth about ionization alarms hidden from fire-fighters and the public, what would their level of motivation be to keep the truth suppressed twenty seven years later when hundreds of thousands of deaths and injuries have occurred?

The IAFC's 'Residential Smoke Alarm Report' is available at: www.WorldFireSafetyFoundation.org/docs

U.S. 'KANGAROO' COURT RULES FIRE SPRINKLERS CANNOT SAVE LIVES

Because the Dunes Tests report contained false data that seemingly confirmed that: *fire will kill before a heat detector will operate*; businesses that were installing heat detectors to protect life were generally forced out of business.

However, some sales people continued to install what they correctly considered to be far more reliable protection, heat detectors plus real (i.e. Photoelectric) smoke detectors. As part of the sales strategy these independent sales people advised the consumers what the IAFC 1980 Report had confirmed - that the

ionization device was unreliable and therefore an unsafe device. However revealing the defects of the ionization device was a threat to the status quo.

The Federal Trade Commission (FTC), citing the Dunes Tests, brought charges against a heat detector manufacturer, Figgie. The FTC, relying on the false conclusions of the Dunes Tests, **claimed that it was dishonest to advertise that heat detectors will operate in time to save lives.**

The former UL Fire Engineer turned Federal fire 'expert' was there as the government's 'expert witness' to testify under oath that the Dunes testing had **proven** heat detectors to be unsatisfactory for protecting lives. The court also ruled that those who would testify for Figgie (claiming that heat detectors do indeed save lives) were "not qualified" to testify as "experts".

The result was that the FTC issued a "FINAL ORDER", to the effect that, **"all officers, agents, representatives and employees that market heat detectors"** (as defined by the NFPA) **shall not claim or advertise that a heat detector will provide "the necessary warning to occupants to allow them to escape safely in the event of fire"**. It also ordered that when marketing heat detectors the following warning must be prominently displayed:

"NOTICE: Smoke detectors give earlier warning than heat detectors in nearly all residential fires. That is because detectable amounts of smoke almost always develop before detectable levels of heat."

Obviously, if a sales person tells the potential customer that the heat detector has no value for protecting life, as mandated by the FTC, not many heat detectors will be sold.

The claim that heat detectors operate too late to protect life also diminished the perceived value of the sprinkler system. All of this resulted in the ionization device manufacturers gaining essentially a monopoly control of a multi-billion dollar home marketplace for fire protection.

If money was all that was involved it would not be so terrible. What really makes it into a **horrendous fraud** is that tens of thousands of lives have been destroyed when the flawed device failed to warn.

NEAR PERFECT SOLUTIONS TO FIRE ARE RESTRICTED FROM USE IN HOMES

The enormous damage done to the American public and foreign nations becomes apparent when the truths about heat detectors/fire sprinklers are revealed.

Years ago two countries, Australia and New Zealand, required that all fire sprinkler systems be electronically monitored with an automatic notification relayed to the fire department. Thus, when any sprinkler system operated the fire department was alerted and responded, documenting the performance of the sprinkler.

As a result, for more than a hundred years, sprinkler activations were investigated with appropriate reports prepared. Finally, an Australian fire protection engineer, Harry Marryatte compiled the data and published a book **'FIRE: A CENTURY OF AUTOMATIC SPRINKLER PROTECTION'** providing the most complete documentation of fire sprinkler performance available.

Amazingly, over a period of one hundred years, only **eleven** deaths occurred within sprinkler protected buildings. That is not eleven per year; it is eleven in total during a one hundred year period.

Now let us consider the performance of a heat detector in relation to a heat detector operated sprinkler head. When a sprinkler operated water would be discharged. Therefore, the heat trigger was **intentionally** manufactured to be **very slow to fuse in order to minimize premature operations and water damage**. During the 1970s I created and codified the "Life Safety Fire Sprinkler System", a far better and more practical system aimed at life safety rather than protecting property.

As a result, fire sprinklers for life safety in residential buildings became practical. That brought about the development of the "fast" sprinkler designed to protect life within a family dwelling. Grinnell, the number one sprinkler company in the United States advertised that the new Grinnell sprinkler was **"up to ten times faster"** than the old industrial type sprinkler. (See the Grinnell ads in *NFPA Fire Journals*, dated July 1983 and March 1984).

Summarizing, the heat detector that will warn of fire but **not** cause water to flow automatically, can be manufactured to be faster to operate than the 'fast' sprinkler, which is up to ten times faster than the old slow type sprinkler. **Yet the old commercial sprinkler that was in use in Australia and New Zealand had been extremely close to a one hundred percent guarantee that fire would not kill.**

AMERICAN HOMES AT RISK

Approximately 94 percent of all fire deaths, caused by building fires, occur within the home. The installation of heat detectors and **reliable** smoke detectors in homes has been almost completely prevented due to the falsified fire tests, the improperly revised NFPA Fire Code 74 and the court decisions.

In addition, fire testing was also falsified to provide 'justification' for setting the **minimum** amount of water (in gallons per minute) to supply a residential sprinkler system at about four times greater than a home will have.

With the rigged fire tests to 'justify' it, the NFPA sprinkler code (NFPA-13R) was structured to also make the installation of residential sprinklers so difficult and costly that probably more than 99% of the residences constructed in the United States since the 1960s have been devoid of this safety system.

As result a defective smoke detector replaced **reliable** fire detectors and only a very small percentage of homes have residential sprinkler systems.

Ionization Detectors - Legal Issues

In other words the heat operated sprinkler was close to a 100% percent guarantee that fire will not kill.

Heat Detectors Fraud

Therefore regulatory corruption has ensured almost all American homes are excessively at risk from fire.

NFPA FRAUDULENT ACTIONS HELP SUSTAIN THE COVER-UP

From the late 1960s on there was an abundance of evidence confirming that the ionization type smoke detector was defective. Thousands of fire deaths and injuries were occurring every year when it failed to warn. However, those who risked alienation by speaking out were few because the most powerful fire related organizations were cooperating in the cover-up.

When the facts were presented to prove the device was defective, the NFPA repeatedly claimed that the ionization 'smoke' detector reduced U.S. fire deaths by 50 percent. Fire department officials quoted that false loss data whenever the promoting of the devices (including giving them away for free for favorable publicity) was criticized.

But what were the facts regarding the fire death reductions? In 1970 **four percent** of the homes in America were "protected" with "smoke" detectors. During a three year period beginning in 1970 there were **13,215 fire deaths** in homes. From 1980 through 1982 (a three year period) the percentage of homes containing "smoke" detectors rose from **50 percent to 67 percent**.

The number of fire deaths in homes during those three years was **13,225**. ***As the number of homes that were "protected" with "smoke" detectors rose from 4 percent to 67 percent no reduction in fire deaths occurred . As of today approximately 94 percent of all fire deaths due to building fires occur in homes.***

The NFPA includes outdoor fires and automobile crash fires and then reports that home fires account for only 80 percent of the fire deaths. Including **non building fires** in the data significantly concealed the extremely deadly nature of the home, even though those so called "smoke" detectors were installed in nearly all homes.

THE NFPA AND JOSEPH E. JOHNSON

Joe Johnson was the president of a manufacturer of a 'products of combustion' detector. He also promoted the claim that this type detector would warn of a potential fire **before** ignition actually began, before smoke appeared.

Proof of this claim never surfaced. In fact, fire testing revealed that the claim was false. However, Mr. Johnson was named to the Board of Directors of the NFPA. Later he was named the Treasurer of NFPA.

During the late 1960s the NFPA code that defined a fire detection system for homes (NFPA 74) mainly relied on heat detectors, the same type of trigger for the sprinkler system.

However, representatives of the NFPA met with a Federal Fire Engineer working for the NBS. He was offered the chairmanship of the NFPA 74 code. During the discussions it was made clear that the code should be revised to upgrade the smoke detector (including the POC detector) and downgrade the heat detector.

This revision in the NFPA 74 code was essentially completed before the Dunes Tests were initiated. The Federal Fire Engineer was then assigned as the Washington based monitor of the Dunes Tests. Thus, when the tests revealed that the ionization device was not able to warn before smoldering began, or even during the smoldering stage this federal monitor of the test was between a rock and a hard place,

as the saying goes. If the full truth concerning the ion detector failures were revealed by the Dunes Tests report, his revisions, already being completed in the code, would be suspect.

It would seem that there was an incentive for the Federal Washington monitor to go along with the falsifying of the Dunes report. The entire situation, from claiming a performance for a detection device that was unreal, to falsifying the research report to hide the false claims, substantiates improper influence in the US fire code making operation.

FORMER UL TEST ENGINEER BECOMES GOVERNMENT'S FIRE DETECTOR SPOKESMAN

During the following years, when the efficacy of the ion device was challenged and evidence was presented regarding the failure modes, the UL Fire Test Engineer who became the Federal fire detector 'expert' was always available to be interviewed on smoke detector performance. Always he would claim that the ionization device would perform just fine and backed it up with the falsified testing and performance claims. He was always ready to cover-up the false testing of the heat detector.

When I appeared before the U.S. Consumer Product Safety Commission (CPSC), urging them to recall all ionization devices, the UL turned Federal 'expert' was there to claim the device would perform just fine.

More recently, when once again those of us who do not like to see the children continuing to burn, challenged the falsehoods that have put a phony 'safety' device into probably 80 million U.S. homes, the UL Engineer turned federal 'expert' was the lead government engineer signing off to another falsified NIST report.

This latest 'phony' government report is entitled, ***Performance of Home Smoke Alarms***. Fortunately, this time someone within the fire services (Joseph Fleming, Boston Fire Department Deputy Fire Chief, Fire Marshal and Fire Protection Engineer) has prepared a rebuttal and the truth is finally being revealed.

RATIONALIZATIONS AND UNTRUTHS

As the story goes, a reporter once interviewed all the criminals sitting on death row waiting execution. When he completed his interviews he was amazed to realize that every one of them considered himself to be a fine person who simply had some bad luck or was the victim of an unjust society.

No doubt, Hitler considered himself to be a great and wonderful person. Those who have cooperated in putting defective smoke detectors in 80 or 90 million homes in the U.S. have helped their self image with innumerable rationalizations of which I will mention but two.

FALSE CLAIM 1: SMOKE ALARMS REDUCE HOMES FIRE DEATHS BY 50%

The NFPA has claimed (falsely) that smoke detectors reduced home fire deaths by 50 percent. So, those who sell defective devices that often fail to warn, see themselves saving lives, not indirectly causing deaths by failing to warn of the scientific fact that the device will not detect common life-threatening fires in a timely manner.

When fire tests were falsified to 'prove' that a fire sprinkler system could not be installed in a home unless it had two to four times more water (gpm) than a home usually has, they did not see an unnecessary barrier to protecting lives with sprinklers. They saw a code mandating 'reliability'. For every deception in the fire regulatory system there is a 'justification'.

What I see are people who are sacrificing human lives for money while justifying their crimes with appropriate rationalizations.

**FALSE CLAIM 2:
THE FIRE DEATH TOLL**

In 1995, I made a calculation of the number of fire deaths that had occurred within smoke detector 'protected' homes from 1970 through 1990. I used loss data compiled by the Federal Emergency Management Agency (FEMA) and the NFPA and data regarding the percentages of homes each year containing smoke detectors, as compiled by the NFPA. During this period approximately **35,000 fire deaths** occurred within homes 'protected' by smoke detectors.

Since 1990 approximately 94 percent of U.S. homes have contained smoke detectors. Therefore it is reasonable to assume at least 70 percent of fire deaths have occurred within smoke detector protected homes because we know (based on other data) that the ionization 'smoke' detector has resulted in only a very small reduction in fire deaths.

Based on NFPA data from 1991 through 2004 there have been an additional 47,000 fire deaths in homes. If 70 percent of these deaths were in homes containing smoke detectors that would mean that about **33,000 additional fire deaths** have happened in homes supposedly 'protected' by smoke detectors.

This will bring the total fire deaths in US homes containing smoke detectors (since 1970) to about 70,000 (if we add in the expected 2005 data, not yet available). Since there are, on average, at least five injuries for every fire death, there have been at least 350,000 fire injuries in the US in homes 'protected' by ionization smoke alarms.

**STATISTICS
DON'T LIE, BUT...**

The NFPA claims that, "**More than half of fire deaths in America occur in five percent of homes with no smoke alarms.**" (This quote was made on June 26, 2006.) The NFPA has been making similar claims for many years now. According to the NFPA 3,190 fire deaths occurred in homes during 2004. So, at least 1,595 home fire deaths (lets round it out to 1,600), occurred in the 5 percent of homes not containing smoke detectors. Or, if we do some simple mathematics, 320 home fire deaths occurred in one percent of the homes devoid of smoke detectors.

This would mean that if no smoke detectors were installed at all, there would be 32,000 fire deaths in homes in America. But, based on NFPA and FEMA data for 1970 (when only 4 percent of the homes contained smoke detectors), there were only 4,450 home fire deaths. Regardless of population change, 4,450 is a long way from the 32,000 that presumably would equate to zero smoke detectors in homes. In short, the NFPA claim that more than half the fire deaths occur in homes devoid of detectors is ludicrous.

No doubt, there are two reasons for this nonsensical data.

1) The first reason is that when a fire death occurs within a home containing smoke detectors the fire investigator is inclined to report that there were "no detectors in the home". Either that or "the battery was missing or dead". Anything but, "we helped sell a defective device that's killing people".

To promote a defective safety device while concealing the defects that will cause it to fail to perform is a crime. Government employees do not like to report that their fellow government employees are committing crimes.

2) The second reason is because the NFPA also has much to lose if the public realizes that they have been served up defective smoke detectors that have already led to approximately 70,000 fire deaths.

There is some loss data, however, that probably is reasonably accurate. For example, while children five and under make up 7 percent of the population they account for 14 percent of the fire deaths. Children 14 years of age and below suffer about 50 percent of the fire deaths. This means that the smoke detector failures are taking a terrible toll on children.

Another statistic from FEMA that probably is reasonably accurate is that, although smoking accounts for only 6 percent of the fires, it produces about 25 percent of the fire deaths. The explanation given is that smoking (smoldering fires) that occur at night can be unusually deadly. So, the cigarette fire that is a smoldering type fire is unusually deadly. And we know that the ionization smoke detector that the NFPA has promoted does not respond to smoldering fires.

**THE #1 LIFE THREATENING
FIRE MYTH - EXPLAINED**

Because the device false alarms frequently when the toast is burnt (See Figure 2.) or the roast is roasted or the shower is 'steamy', nearly everyone assumes the device is especially sensitive and quick to warn of a *real* house fire. The reason why that is not so is a mystery to most members of the public.



I will try to make a complex issue easy to understand using non scientific language. The ionization device will detect

particulate (particles suspended in air) provided the particulate contains an extremely large number of very small solid or liquid particles.

The particulate that is capable of causing the device to sound may consist of perhaps a million or more individual particles within one cubic inch of space. That is, if the number of particles in one shot glass is about a million, more or less, the particulate is in excellent shape to make the device sound.

When the particles are small enough that a million can fit in a shot glass they are too small to be seen by the human eye. Hence the particulate is invisible. We could call it 'invisible smoke'. When the ion detector was first introduced, they called particulate invisible to the human eye 'products of combustion'.

Ionization devices usually contain one microcurie of a radioactive isotope called Americium 241. As this radioactive isotope, decays it emits 37,000 Alpha particles per second. These particles are positively charged and create an electric current across the detection chamber of the device. An Alpha particle is the nucleus of the Helium atom. It is incredibly small. It creates an electric current by knocking electrons off atoms in the air. In order to significantly interfere with and reduce that current, causing an alarm to sound, ***the number and size of the particles entering the chamber must be reasonably of like size and number to the Alpha particles.***

When the combustion produced particles are large enough to be seen by the human eye (and therefore considered to be smoke) ***they are too large and too few*** to significantly interfere with ***the 37,000 atomic sized particles being emitted by the Americium every second of time.*** Sometimes there are sufficient 'large' particles to be visible and be seen as 'smoke' and also sufficient ***"near atomic sized"*** particles to cause the device to sound; therefore it ***appears*** that ***visible smoke*** is causing the device to sound.

While the ionization device will detect particulate of various size and number; in general the detectable particulate will consist predominantly of minute particles far too small to be seen by the human eye. When the toast is toasting and the "smoke" detector starts sounding, often there will be little or no ***visible*** smoke.

The problem is that many, probably most fires, do not create the type of '***invisible smoke***' that trips the ionization device. And, even when the smoke created is the 'right' type, the minute particles will always agglomerate (bind together) on the way to the detector and may become 'too large' by the time they enter the detection chamber to cause it to sound.

Therefore, in many instances the device remains silent when the fire is either smoldering or small, sounding only when the fire becomes larger or life threatening. Sometimes the ionization type, so called smoke detector, never sounds as the home burns to the ground.

THE SMOKE DETECTOR 'TESTER' DECEPTION

It is not unusual for a fire department inspector to visit an apartment complex, mobile home park, health care facility and sometimes even individual dwellings to test the installed smoke detectors. Testing can be done by pushing the 'test' button. Unfortunately this 'test' proves little beyond testing the

alarms siren and battery, NOT if it will detect smoke! Some inspectors use a spray can commonly labeled: 'Smoke Detector Tester'.

This is a spray can full of a vaporizing liquid that looks like a paint spray or a bug spray can. The inspector gives the smoke detector a spray from the can and when it sounds he tells the homeowner that the smoke detector works just fine. He leaves with a smile and a "thank you" as he departs. What a wonderful service, right? **Wrong!**

One critical detail that is not mentioned. The liquid in that can, when vaporized, is the perfect particulate, designed to deliver just the right type and number of microscopic particles to the detection chamber of the alarm. I have explained why the 'smoke' has to be just the 'right type' of smoke to be able to cause the ionization type detector to sound. However, more than half the time a real early fire does not deliver that 'right type of smoke' to the device. Just as the early 'testing' of the ionization type 'smoke detector' was accomplished with the 'right type' of fire (flaming carbon paper in a waste paper basket) today many fire inspectors are using the "right type" of particulate to 'prove' it will sound in a fire situation.

This is one more instance of the fire establishment lulling consumers into a false sense of security. Believing that what is installed will adequately protect their children, parents do not purchase more reliable protection. In fairness to the inspector, most of them have absolutely no idea that this so called 'test' is not valid.

UL allows their label to be used in marketing ionization alarms and knows their limitations as does the NFPA. Some years back I wrote and complained to the NFPA about deceiving the consumer with the vaporizing liquid 'tester'. I did not receive any response.

STOP THE CHILDREN BURNING

People believe that the ionization device will warn of fire when the house is burning and the children's lives are in danger. And why shouldn't they believe it? They are being advised by the fire department officials and other government agencies.

The Consumer Product Safety Commission (CPSC) makes a federal case over loose buttons on Teddy Bears but so far has actually helped hide the ongoing 30 year smoke detector fraud by failing to provide the consumer with the truth about the device.

Defective ionization smoke alarms have become the substitute for proper, affordable and available protection that could dramatically reduce fire deaths and injury.

However because of the public's false sense of security proper protection has been kept out of the home.

Finally the efforts to bring the ***smoke detector fraud*** to a close by informing the public of the facts are succeeding. The 'reveal the truth' effort is being played out in Australia and New Zealand.

Adrian Butler, former professional fire-fighter and Karl Westwell are Co-Founders of the World Fire Safety Foundation (WFSF). They have initiated a world wide educational program targeting fire fighters and parents. The Foundation will inform

the public of the safe alternatives so they can properly protect their families from fire.

The World Fire Safety Foundation's is committed to warning fire-fighters and the public of the dangerous, life-threatening limitations of ionization smoke alarms and to have them banned from residential dwellings globally.

Two independent technical experts involved with national fire safety standards, David Isaac, Australian Standards Committee member and David Calvert, Executive Director of the New Zealand Safety Council have been instrumental in bringing about changes within the fire regulatory system in their respective countries. Isaac and Calvert are among a growing number of WFSF Advisory Board members from around the world who are helping make significant steps towards a revolution in residential fire safety.

WE NEED YOUR HELP

The IAFC's attempt in 1980 to warn Fire Chiefs of the misleading claims by manufacturers and the inherent dangers of ionization smoke alarms failed. Ionization smoke alarms are installed in most homes in most countries around the world.

Since 1980, the need for early warning of home fires has dramatically increased. Fast burning synthetics, a proliferation of low cost electronic devices and other factors have resulted in a reduction of the time required to safely escape from a house fire.

Ionization smoke alarms have lulled consumers into a false sense of security for decades. They have rung in our ears in the mornings in the hot smoke from burnt toast. But at night when we are most vulnerable, they remain silent when the cold smoke from smoldering fires, the type of fire that so often kills, fails to

activate them.

Hundreds of thousands of needless deaths and injuries have occurred in homes 'protected' by ionization smoke alarms since the IAFC's warning. Unfortunately the forces that kept the truth suppressed in 1980 are more motivated to keep it buried today!

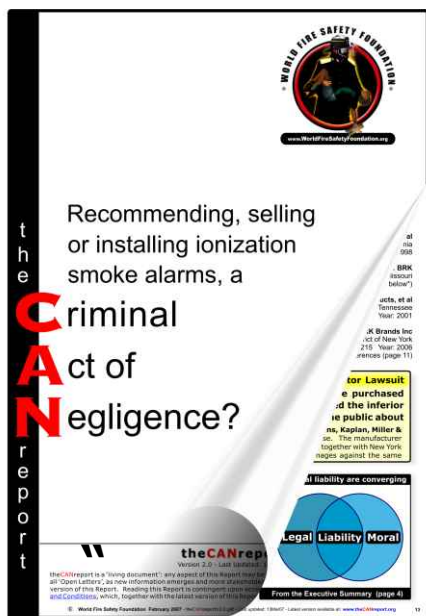
Watch the smoke alarm demonstration that in July 2006 inspired US fire-fighters to discover the truth at: www.AquariumTest.com Fire-fighter's and fire industry professionals can read about technical and legal issues in the World Fire Safety Foundation's **'Recommending, Selling or Installing Ionization Alarms, A Criminal Act of Negligence?'** report at: www.theCANreport.org

Properly protect *your* family from fire then help us spread this message - so together we can... **Stop the Children Burning!**

Sincerely
The Crusade Against Fire Deaths Inc.

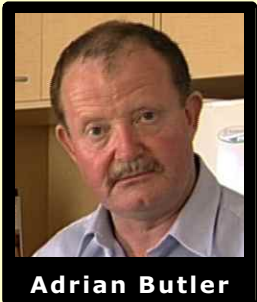


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The CAN Report

If you're in the fire industry, a fire-fighter, or if you recommend, sell or install smoke alarms, you may be an unwitting accomplice to one of the most insidious crimes ever perpetrated."



Adrian Butler

Adrian Butler, World Fire Safety Foundation Co-Founder

www.theCANreport.org

The Crusade Against Fire Deaths Inc.

THE CRUSADE

“In 1980 The International Association of Fire Chiefs (IAFC) said they could take no other course but to recommend photoelectric smoke alarms. Since then, despite overwhelming evidence of defects, more than 50,000 deaths and 250,000 injuries have occurred in homes ‘protected’ by ionisation alarms”.

Richard M Patton, F.P.E.



For more information about the Crusade visit us at:
www.FireCrusade.com

THE FOUNDER



Richard M Patton
Fire Protection Engineer

In August 2001, the 'Fire Protection Contractor' Magazine named Richard M Patton, *'Person of the Year'*. Patton's 'Crusade Against Fire Deaths' started in 1976 when he sent 3,000 *'Smoke Alarm Fraud'* reports to Fire Chiefs and Fire Engineers across the U.S. Patton's relentless 30 year fire industry crusade was the inspiration behind the fire safety documentary *'Stop The Children Burning.'*

“What Dick Patton has to say ... should be the starting point for a full-fledged investigation ... at a senior government level - with qualified professionals...”

Garth Stouffer, Manitoba Sun Newspaper

EXPERT WITNESS

Mr Patton has been involved in court cases involving death and injury as a result of defective fire protection equipment. In every case when Mr Patton has laid out the evidence against the fire industry the case has been settled out of court in favor of the plaintiff. Mr Patton is available at:

Crusade Against Fire Deaths Inc.

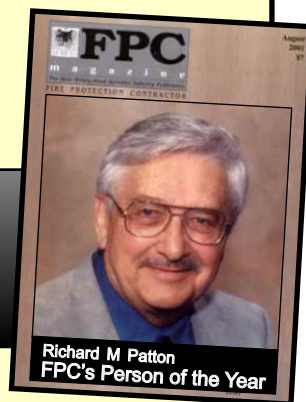
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**Click Here To Read
About Mr. Patton's
Credentials,
Experience and
Endorsements.**



The Radioactive Ionisation Smoke Alarm
THE SILENT KILLER



CRUSADE POSITION STATEMENT

The Crusade contends that decades of scientific testing and evidence from tens of thousands of 'real world' fire deaths, substantiates conclusively, that the ionization smoke detector is proven to be defective in **BOTH** smouldering and fast flaming fires!