

Miller, Diane M. (CDC/NIOSH/EID)

From: Ken LaSala [KLaSala@iafc.org]
Sent: Tuesday, March 03, 2009 11:59 AM
To: NIOSH Docket Office (CDC)
Cc: Vicki Lee
Subject: 141 - Draft NIOSH Alert: Preventing Deaths and Injuries of Fire Fighters When Fighting Fires in Unoccupied Structures
Attachments: NIOSH Comment March 3 2009.pdf; IAFC March 3 Cover Letter re NIOSH Docket NIOSH-141 .pdf

To Whom It May Concern,

Attached please find a cover letter and comments from the International Association of Fire Chiefs (IAFC) regarding the NIOSH Alert entitled "Preventing Deaths and Injuries of Fire Fighters When Fighting Fires in Unoccupied Structures (Docket ID: NIOSH-141)."

The IAFC appreciates the NIOSH's work on this document, and the opportunity to comment on it.

Thanks,

Ken LaSala
Director of Government Relations
International Association of Fire Chiefs
Phone: 703-273-9815 x347
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March 3, 2009

Dr. Nancy A. Stout
Director, Division of Safety Research
National Institute for Occupational
Safety and Health
NIOSH Mailstop: C-34
Robert A. Taft Laboratory
4676 Columbia Parkway
Cincinnati, Ohio 45226

RE: Request for Recommendations for NIOSH Alert entitled "Preventing Deaths and Injuries of Fire Fighters When Fighting Fires in Unoccupied Structures" (Docket ID: NIOSH-141)

Dear Dr. Stout:

On behalf of the nearly 13,000 chief fire and emergency officers of the International Association of Fire Chiefs (IAFC), I would like to submit the attached comments regarding the NIOSH Alert entitled "Preventing Deaths and Injuries of Fire Fighters When Fighting Fires in Unoccupied Structures."

The IAFC fully supports and encourages the efforts of the National Institute for Occupational Safety and Health (NIOSH) to reduce firefighter deaths. According to the U.S. Fire Administration, 114 firefighters died in 2008. The NIOSH should be applauded for its efforts to reduce this tragic number of deaths.

As the attached comments describe, the IAFC would recommend editorial changes to the NIOSH Alert to prevent confusion. The advisory seems to suggest that the only justification for conducting offensive firefighting operations is to rescue people inside a burning building. This policy would preclude conducting interior offensive firefighting operations in any "unoccupied" building, which we believe is inconsistent with NFPA 1500 and other references cited in your alert. Instead, the IAFC believes that the primary message of the alert should be to encourage fire fighters (especially officers and incident commanders) to apply accepted risk management principles to prevent needlessly risking the lives of fire fighters.

Thank you for considering the attached analysis and recommendations regarding this NIOSH Alert. If you have any questions regarding our comments, please call Chief J. Gordon Routley, of the IAFC Safety, Health and Survival Section Board of Directors, at (514) 892-4227, or Ken LaSala, Director of Government Relations, at (703) 273-9815, ext. 347.

Sincerely,

A handwritten signature in black ink that reads "Larry J. Grouud". The signature is written in a cursive style.

Chief Larry J. Grouud, CFO, MIFireE
President

**COMMENT SUBMITTED BY THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS (IAFC)
AND THE SAFETY, HEALTH AND SURVIVAL SECTION OF IAFC
REGARDING THE THE DRAFT DOCUMENT “NIOSH ALERT – PREVENTING DEATHS AND
INJURIES OF FIRE FIGHTERS WHEN FIGHTING FIRES IN UNOCCUPIED STRUCTURES.”**

The International Association of Fire Chiefs (IAFC) and the Safety, Health and Survival Section of IAFC have carefully reviewed the draft document “NIOSH Alert – Preventing Deaths and Injuries of Fire Fighters when Fighting Fires in Unoccupied Structures.”

We fully support and encourage the efforts of NIOSH in producing this document as part of the overall effort to prevent firefighter fatalities. The draft document reinforces critical lessons that will help to reduce the risk of fire fighter fatalities. While we appreciate the effort that has gone into the development of this document, our review identified serious concerns. We believe that editorial changes are required to avoid potential confusion.

The term “unoccupied structure” is applied broadly in the draft document, referring to any building that is not occupied by any humans at the time an incident occurs. This terminology is likely to cause confusion among firefighters and could compromise the credibility of the document with the target audience.

The advisory appears to suggest that the only justification for conducting offensive firefighting operations is to rescue persons who are inside a burning building. This may be interpreted as advocating a policy that would preclude conducting interior offensive fire fighting operations in any “unoccupied” building, which covers an extremely wide range of situations. This policy is not consistent with the intent of NFPA 1500 and the other cited references.

The primary message that should be delivered by the alert document is to encourage fire fighters (particularly officers and incident commanders) to apply accepted risk management principles. The risk management principles are intended to ensure that the lives of firefighters are not risked needlessly or inappropriately. Several sources are quoted to provide the foundation for the risk management principles, particularly NFPA 1500, Standard on Fire Department Occupational Safety and Health Program (2007 edition).

Classification of Occupancy Status

The draft document advocates a policy that would preclude conducting offensive operations in all “unoccupied” buildings. A very broad definition is applied to the term “unoccupied” - referring to any building that does not contain human occupants. This suggests that fire fighters should never conduct offensive firefighting operations to save property in a building that has no human occupants.

The fire service uses an expanded set of definitions to describe the occupancy status of buildings:

- “Abandoned” (or “derelict”) refers to a structure that is not being used for any purpose and is not being maintained or preserved for some future use or

occupancy. In many cases the building could be classified as a public nuisance awaiting demolition. A building in this condition has no value or negligible value.

- "Vacant" refers to a building that is not currently in use, but which could be used in the future. The term "vacant" could apply to a property that is for sale or rent, undergoing renovations, or empty of contents in the period between the departure of one tenant and the arrival of another tenant. A vacant building has inherent property value, even though it does not contain valuable contents or
Deaths and Injuries of Fire Fighters when Fighting Fires in Unoccupied Structures.

We fully support and encourage the efforts of NIOSH in producing this document as part of the overall effort to prevent firefighter fatalities. The draft document reinforces critical
importance to help address the risk of firefighter fatalities. While we appreciate the
could also apply to a building that is routinely or periodically occupied; however the occupants are not present at the time an incident occurs. A residential structure could be temporarily unoccupied because the residents are at work or on vacation. A building that is temporarily unoccupied has inherent property value as well as valuable contents.

- "Evacuated" refers to a building that was occupied (or could have been occupied) at the time an incident occurred; however all of the occupants have self-evacuated, have been assisted in evacuating or have been rescued by fire fighters. At this point there is no possibility of saving the lives of any remaining occupants. A building that has been evacuated generally has inherent property value as well as valuable contents.

Only the category "abandoned or derelict" refers to a building that is considered to have negligible property value. Buildings that are described as "vacant", "unoccupied" or "evacuated" are all assumed to have property value. Accepted fire service risk management principles recognize that offensive strategy is often justified and is frequently employed in efforts to save property where there are no human occupants to be saved.

Risk Management Principles

The principles of risk management are intended to balance the acceptable level of risk to fire fighters with the anticipated benefits of taking different actions in different situations. All firefighting operations (offensive or defensive) involve inherent and unavoidable levels of risk to fire fighters. The inherent risks can only be avoided completely by taking no action to fight the fire and in many situations the levels of risk to fire fighters, to citizens and to the community are likely to increase if no action is taken.

The reference from NFPA 1500 states: "the acceptable level of risk is directly proportional to the potential to save lives or property. Where there is no potential to save lives, the risk to fire department members should be evaluated in proportion to the ability to save property of value. When there is no ability to save lives or property, there is no justification to expose fire department members to any avoidable risk and defensive fire suppression operations are the appropriate strategy."

The same concepts are expressed as rules of engagement in the annex to NFPA 1500:

1. We will risk our lives a lot, in a calculated manner, to save SAVABLE LIVES.
2. We will risk our lives a LITTLE, in a calculated manner, to save SAVABLE PROPERTY.
3. We WILL NOT risk our lives at all for a building or lives that are already lost.

(NOTE: It has been suggested that these three statements should be presented in the inverse order to emphasize their relative importance in relation to risk management.)

The intent of these references is clearly directed toward evaluating risk factors and calculating acceptable risk levels. There is absolute recognition of the fact that fire fighters are routinely exposed to certain known and predictable risks while conducting operations that are directed toward saving property. The Incident Commander is responsible for recognizing and evaluating those risks and determining whether the level of risk is acceptable or unacceptable.

None of the cited references advocate a policy that would limit fire departments to conducting defensive (exterior) operations in any situation that does not involve saving lives. The Incident Commander must make a determination that offensive (interior) operations may be conducted without exceeding a reasonable degree of risk to fire fighters before ordering an offensive attack and must be prepared to discontinue the offensive attack if the risk evaluation changes during the operation.

A full range of factors must be considered in making the risk evaluation, including (but not limited to):

- Presence of occupants in the building
- A realistic evaluation of occupant survivability and rescue potential
- Size, construction and use of the building
- Age and condition of the building
- Nature and value of building contents
- Location and extent of the fire within the building
- Fire involvement or compromise of the building's structural components
- A realistic evaluation of the ability to execute a successful offensive fire attack with the resources that are available

The document should be revised to emphasize the Incident Commander's responsibility to consider all of the applicable factors in making a determination of the appropriate strategy. The predominance of efforts to save lives over efforts to save property should be expressed in a more appropriate context.

Case Studies

The four Case Studies that are used in the draft document represent four different situations that must be considered individually.

Case Study 1 presents a serious fire in an *abandoned* property. In this case defensive strategy appears to be the appropriate choice.

Case Study 2 presents a fire in a residence in which the occupants were known to be absent, however there was property that probably could have been saved by an effective offensive attack. The observation that the fire had caused structural deterioration (spongy floor) created an unacceptable risk condition.

Case Study 3 presents a fire in a business occupancy which is described as vacant. The scenario suggests that the building was being used by one or more businesses that were closed at the time the fire occurred. While there were no lives at risk, there could have been valuable property to be saved. The Incident Commander would have to consider the realistic potential for saving property of value in relation to the risk of death or injury to firefighters, taking all factors into account.

Case Study 4 presents a fire in a church that was known to be unoccupied at the time of the incident. The description indicates that the Fire Chief made an initial determination that an offensive attack was justified based on the potential to save property. The Fire Chief subsequently determined that the risk factors had become excessive and called for a switch to defensive strategy. This suggests that an appropriate risk management decision was made; however the change to defensive strategy was too late to prevent one death and two injuries. The compelling factor in making the decision was not that the building was unoccupied, but rather that the fire had advanced to a point that the stability of the structure was compromised.

Discussion

The fundamental risk management decision is exercised through the decision to engage in offensive (interior) fire suppression operations and defensive (exterior) operations. The level of risk exposure is minimized when fire fighters conduct defensive operations; remaining outside the fire building and outside the potential collapse area. The level of risk exposure increases substantially when firefighters engage in offensive operations, inside a burning building.

The decision between offensive and defensive strategy cannot be reduced to considering whether a building is occupied or unoccupied. The level of risk exposure varies in relation to several factors, including the magnitude, extent and location of the fire within the building. The Incident Commander must take all of these factors into consideration when making a determination of the appropriate strategy.

It is an oversimplification to suggest that offensive strategy is never appropriate unless there are lives to be saved inside a building. When there are no lives at risk, the Incident Commander must carefully evaluate and limit the exposure of fire fighters to the risk of death or injury. There are many situations where offensive strategy may be employed to save property of value without exposing fire fighters to excessive risk. The challenge for the Incident Commander is to recognize when the level of risk becomes excessive and to call for defensive strategy in those situations.

Recommendations

The final version of the NIOSH document should emphasize the critical importance of risk management in relation to fire fighter safety. The principles of risk management should clearly state the predominance of saving lives over saving property and the avoidance of risk when there is no realistic possibility of saving lives or property of value. The terminology should be changed to consider a range of occupancy status classifications, as opposed to "occupied" or "unoccupied."

The acceptable level of risk is proportional to the results that can be accomplished by exposing fire fighters to particular risk factors. The risk management decision making process requires consideration of the occupancy status of a building as well as the full range of risks factors that apply to a particular situation. All of the risk factors must be evaluated in the appropriate context.

We recommend the addition of a reference to a standard system of marking dangerous vacant, abandoned and derelict buildings, based on a pre-fire assessment of their structural conditions and other risk factors. (The Commonwealth of Massachusetts has a program of this type.)

We also recommend a reference to the IAAI/USFA Abandoned Buildings Project (conducted by the International Association of Arson Investigators and the United States Fire Administration) and to other programs that encourage marking as well as securing and/or demolition of unsafe buildings.