



# INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS®

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U.S. Department of Labor  
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## **Re: Emergency Response and Preparedness Request for Information**

The International Association of Fire Fighters (IAFF) is the only employee representative for career fire fighters in the United States. The IAFF represents 287,000 career fire fighters -- 85% of fire service members in the U.S. Career fire fighters protect 80% of the U.S. population. Additionally, IAFF members--fire fighters, EMTs and paramedics--provide 95% of first responder medical service, including basic and advance life support and more than half of the emergency medical transport, in this country. The membership of the IAFF is employed by various parties that include the federal government, states, counties, municipalities, fire districts, airports, and industrial manufacturers.

The IAFF has been actively involved in the health, safety and medical issues of fire fighters for more than 50 years. Our organization continues to be in the forefront of improving the lives of fire fighters by developing and assisting in implementation of proactive health, safety and medical initiatives. The IAFF has fully reviewed the September 11, 2007, Occupational Safety and Health Administration (OSHA) request for information (RFI) and provides the following:

**Question 1:** If the Agency takes action on emergency response and preparedness, should it consider either all types of emergency incidents (e.g., both common and rare events) or should certain types of incidents be excluded? If you believe a limited range is appropriate, what types of incidents or activities should be included?

**IAFF Response:** OSHA must take such action and no incident types or responding activities should be excluded. Emergency response agencies must not only be prepared for mitigating emergency incidents in their jurisdictions, but must be prepared, before and during the event, to ensure the health and safety of their employees is protected. After significant, albeit rare and unexpected emergency events, including the Oklahoma City bombing, the September 11, 2001 attacks, Hurricanes Rita and Katrina, and infectious disease response (avian flu, anthrax, smallpox), emergency response agencies are well aware of the health and safety consequences to their employees. Significant planning for similar events has been initiated, implemented and funded on the federal, state

and local level. OSHA and its state plan agencies must be prepared to “take action” including applicable enforcement when such events occur.

**Question 2:** Should OSHA consider the full continuum of activities to be considered “emergency response and preparedness”?

**IAFF Response:** All phases of an emergency operation should fall under OSHA enforcement actions. If a jurisdiction deploys to an incident, they must be prepared to ensure, as practical and required, the health and safety of their employees. While initial emergency response activities, especially during the rescue phase, may be viewed as “unsafe” by those outside of emergency response, proper command, procedures, training, equipment and PPE can and do allow such operations to be conducted in a safe manner. Accordingly, all phases of emergency activities, including response, search, rescue, mitigation, hazard control, monitoring, recovery, decontamination, and clean-up that involve emergency response employees must be considered.

**Question 3:** What are the factors that should indicate when the emergency response to an event has fully transitioned into remediation/recovery?

**IAFF Response:** As long as the emergency response employees and their resources are on the emergency scene, it should not matter to OSHA what “phase” the emergency has transitioned; the health and safety of these employees must still be protected.

**Question 4:** What types of work tasks (e.g., interior structural firefighting, exterior firefighting, pre-hospital emergency medical work, technical rescue, heavy equipment operation) should be considered emergency response or skilled support work? What are the hazards associated with each type of work task? Are there any specific work tasks that should be excluded from consideration (e.g., work that is inherently and exclusively performed by law enforcement officers)?

**IAFF Response:** Any work tasks at an incident where an emergency response employee responds to deliver emergency services, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation must be considered emergency response. Regardless of who has the responsibility, no work tasks at an emergency operation should be excluded from regulatory action. The IAFF, as part of our Project HEROES<sup>®</sup> (Homeland Emergency Response Operational and Equipment Systems) Program developed and provided the NIOSH National Personal Protective Technology Laboratory a detailed report “*A Review of Modern Fire Service; Hazards and Protection Needs*”, which addresses emergency services hazards (report enclosed). The following chart summarizes the hazards experienced in the fire services as addressed in this report:

<b>Hazard</b>	<b>Description</b>
<b><i>Physical Hazards</i></b>	
Falling objects	Includes objects from heights or items being dropped by responder
Flying debris	Includes small solids (particulates) created by grinding or other causes
Projectile/ballistic	Includes fast moving small objectives (e.g., bullets, explosion fragments)
Abrasive/rough surfaces	Includes any rough surface (e.g., asphalt)
Sharp edges	Includes cut glass or metal or other cut hazards
Pointed objects	Includes nails or other puncture hazards
Slippery surfaces	Includes wet surface for walking or gripping
Excessive vibration	Includes repetitive, high frequency vibration
<b><i>Environmental Hazards</i></b>	
High heat/humidity	Includes ambient conditions where temperature exceeds 80°F and/or 80% relative humidity
Ambient cold	Includes temperature below freezing
Wetness	Include any adverse wet weather condition such as rain, sleet, snow or water spray from hose use
High wind	Includes high winds associated with thunderstorms, tornados, hurricanes
Insufficient/bright light	Includes hazards related to responder ability to see
Excessive noise	Include hazards from working environment preventing communication
<b><i>Chemical Hazards</i></b>	
Inhalation	Includes any airborne health hazard which can be breathed by responder
Skin absorption/contact	Includes contact with liquid chemicals/solid or skin toxic gas/vapor chemicals
Chemical (terror) agents	Includes exposure to chemical agents by terrorism or by DOD release
Chemical ingestion/injection	Includes accidental ingestion or injection of chemicals
Liquefied gas contact	Includes exposure to liquefied or cryogenic gases
Chemical flashover	Includes flash fire caused by ignition of chemical vapor cloud
Chemical explosions	Includes explosions caused by reacting chemicals

<b>Biological Hazards</b>	
Bloodborne pathogens	Includes contact with Hepatitis or HIV
Airborne pathogens	Includes any exposure to airborne pathogens such as tuberculosis
Biological toxins	Includes exposure to diseases from plants/animals (from bites)
Biological allergens	Includes exposure to natural substances producing allergic reactions (e.g., poison ivy)
<b>Thermal Hazards</b>	
High convective heat	Includes prolonged exposure (>10 minutes) to high air temperature (>200°F)
Low radiant heat	Includes exposure to heat from radiant sources such as approaching fire (0.05 - 0.5 cal/cm <sup>2</sup> sec)
High radiant heat	Includes exposures to high heat from radiant sources such as burning fuel or large fires (>0.5 cal/cm <sup>2</sup> sec)
Flame impingement	Includes direct contact with flame from burning structures
Steam	Includes exposure to steam during response
Hot liquids	Includes exposure to hot water/other hot liquids at response
Molten metals	Includes exposure to metal objects which become molten at response
Hot solids	Includes exposure to any hot solids (e.g., burning embers) at response
Hot surfaces	Includes short contact (>10 seconds) to hot surfaces (>250°F)
<b>Electrical Hazards</b>	
High voltage	Includes contact with high voltage lines such as from industrial facilities
Electrical arc flashover	Includes exposure to electrical arc created by transforms producing high heat in very short period of time (<1 second)
Static charge buildup	Includes self-generation of static electricity during movement or rubbing against surfaces
<b>Radiation Hazards</b>	
Ionizing radiation	Includes radiation associated with nuclear processes
Non-ionizing radiation	Includes radiation associated with infrared, ultraviolet, microwave, radio transmissions

<b>Person-Position Hazards</b>	
Daytime visibility	Includes ability to be seen during the daytime (especially around traffic)
Nighttime visibility	Includes ability to be seen during nighttime conditions
Falling	Includes falling off elevated surfaces or platforms
Drowning	Includes hazard of falling into water while being burdened
<b>Person-Position Hazards</b>	
Daytime visibility	Includes ability to be seen during the daytime (especially around traffic)
Nighttime visibility	Includes ability to be seen during nighttime conditions
Falling	Includes falling off elevated surfaces or platforms
Drowning	Includes hazard of falling into water while being burdened
<b>Person-Equipment Hazards</b>	
Material biocompatibility	Includes any reactions of skin from wearing of PPE (e.g., latex allergies)
Ease of contamination	Includes buildup of contamination which may occur from repeated responses
Thermal comfort	Includes thermal comfort and potential for heat stress while wearing PPE
Range of motion	Includes head, torso, arm, and leg movement as affected by wearing of PPE
Hand function	Includes impact of gloves on hand dexterity, tactility, and grip
Ankle/back support	Includes degree of support provided by footwear to ankle (for avoiding sprains) and support by other devices (clothing or belts) for back to avoid strain
Vision clarity	Includes ability of wearer to clearly see through visor or other PPE
Communications ease	Includes ability of PPE wearer to hear and to be heard
Fit (poor)	Includes degree of comfort as affected by relative fit of PPE
Ease of donning/doffing	Includes ease of wearing putting on or taking off PPE

**Question 5:** Are there any new data that describe the nature, magnitude, or impact of emergency response and preparedness operations (e.g., type and number of incidents, type and quantity of employees considered emergency responders, financial costs, or occupational injuries, illnesses, and fatalities) that OSHA should consider when evaluating the issue of emergency response and preparedness? In particular, are there relevant data on skilled support employees at emergency incidents or during preparedness activities?

**IAFF Response:** OSHA should consider the report developed by the United States Fire Administration in cooperation with the National Fire Protection

Association: "*Four Years Later – A Second Needs Assessment of the U.S. Fire Service*" [A Cooperative Study Authorized by U.S. Public Law 108-767, Title XXXVI FA-303/October 2006].

**Question 6:** As OSHA considers the necessity for further action on the safety and health of emergency responders, are there issues or concerns that are specific to such employers or employees that the Agency should consider? If your State has promulgated standards or issued guidance on emergency response and preparedness that differs from the existing OSHA standards and guidance, please describe the action taken as well as the impact and effect on the user community. Are there any concerns specific to the State agencies administering OSHA approved safety and health plans regarding OSHA's consideration of action in this area?

**IAFF Response:** Obviously, there needs to be harmonization by federal OSHA with other federal activities affecting the health and safety of emergency responders. The IAFF also believes, pursuant to federal law, that all state plan states be *minimally* at least as effective as federal OSHA regulations. State plan states should also be permitted to provide protection through regulations in areas where federal OSHA either failed to address or where standards become out dated.

**Question 7:** In states that do not have OSHA approved workplace safety and health plans, to what extent are OSHA standards used as guidance for emergency responders who are public sector employees or as guidance for voluntary state public sector protection programs (e.g., personal protective clothing and equipment, training, and safety procedures)?

**IAFF Response:** OSHA coverage in many non-State plan states remains a problem and in many states today, there is no coverage and enforcement for public employee first responders. Of course OSHA standards can and are used in all states as minimal standards for emergency response, especially during litigation activities. However, this issue is outside of OSHA's regulatory authority and must be address by Congress, which has now ignored these issues for almost 40 years.

**Question 8:** Is the current edition of the NFPA 1971 standard, including the requirement for inherently flame resistant material, appropriate to consider? Should OSHA consider other standards, such as those issued by the International Standards Organization (ISO)?

**IAFF Response:** Protective clothing ensembles for structural fire fighting and for proximity fire fighting operations must meet the current edition (2007) as minimum protection. The 1975 edition is woefully out-of-date by 7 subsequent editions. There are not many requirements in this old edition that is relevant

today. The current OSHA regulations for fire fighter protective clothing fail to address several significant hazards that fire fighters face routinely, including, but not limited to, hazardous liquid exposure, bloodborne pathogen exposure, elevated heat exposure, and the stress impact of clothing. Provisions in any revised OSHA regulations addressing PPE must account for future editions of cited NFPA and other standards, where improvements in both technology and protection have been established.

OSHA should consider other standards that are developed for the emergency response community, including those published by ISO, as long as equivalent protection is established to the NFPA standards. Additionally, as previously stated, harmonization must exist between federal agencies. The US Department of Homeland Security has now, as required by Homeland Security Presidential Directive, adopted many NFPA, as well as NIOSH, PPE standards.

**Question 9:** Is a PASS device necessary and appropriate for firefighters' safety in non-shipyard situations?

**IAFF Response:** Yes. The concept of PASS involves small, lightweight, inexpensive devices with several distinct features. The alarm signal must be able to be activated manually by the user. The device must also contain a motion detector which senses movement or the lack of movement. The alarm signal must be capable of being activated automatically through interaction with the motion detector under a specified series of events. PASS must also have a pre-alert signal to prevent false alarms by alerting the user that the motion detector has activated the automatic alarm signal sequence.

Fire fighters trapped in smoke-filled buildings have been known to behave in a disoriented manner as they attempt to escape. This scenario is commonly found in fire fighters' deaths caused by smoke inhalation. Even with the use of self-contained breathing apparatus (SCBA), the fire fighter faces similar dangers brought about by the fact that their breathing supply is limited, usually only about 15--20 minutes for a 30-minute rated SCBA. In addition, no matter how technologically advanced, respiratory apparatus can and does fail.

A well-publicized example was the 1979 deaths of three fire fighters in a Lubbock, Texas restaurant fire. While a number of causal factors have been identified and examined as potentially responsible for the fatalities, including the failure of the breathing apparatus, there was one common element linking the three fire fighters. All three men had become disoriented in a large smoke-filled dining room.

Likewise, four Syracuse, New York fire fighters were killed in 1978 while fighting a fire in a three-story wood-frame Syracuse University dormitory. After being overcome by smoke, the fire fighters became disoriented in the narrow hallways on the top floor of the dormitory.

In 1979 when a City of Los Angeles, California fire fighter was killed after becoming disoriented in an industrial warehouse, cries for help from the fire fighter were heard and a search was begun, but dense smoke cut visibility to inches in the 100- by 200- foot structure. By accident, a fire fighter who had not heard the cry for help stumbled upon the fire fighter. He provided the unconscious fire fighter with air from his SCBA until he exhausted his own air supply. Finally, the "rescuer" was overcome with smoke himself and had to abandon the unconscious fire fighter. Based on erroneous reports that the fire fighter who cried for help had been found, the search was stopped. When the report could not be confirmed, the search began again. Forty-five minutes after the shout for help was heard, the fire fighter was finally located but it was too late. This incident eventually prompted the California Occupational Safety and Health Administration (CAL/OSHA) to adopt a standard mandating the use of PASS beginning October 1, 1983 for all fire fighters in the State of California engaged in fire fighting activities requiring the use of SCBA. In a report, CAL/OSHA stated, "Firefighters working in a hazardous location where self-contained breathing apparatus is required may become lost or disoriented, injured, entrapped, and cannot find an exit and, due to location and/or poor visibility other persons in the area may not know of the emergency, and, if they did, may not be able to locate the fire fighter in time to rescue him. At the present time, no personal rescue alarm device or rescue strobe light is provided fire fighters. The evidence indicated that all fire fighters required to engage in structural fire fighting operations should be provided personal rescue alarms."

Yet in 1986, two Biloxi, Mississippi fire fighters died when fire overran a second floor bedroom. The two fire fighters had entered the building without a hose line and without the knowledge of others at the scene. The bodies of the fire fighters were not discovered until final extinguishment, nearly an hour and forty minutes after they had entered the building. No one had missed them during that entire time period.

A 15-month study which investigated line-of-duty fire fighter deaths published by the International Association of Fire Fighters (IAFF) found that the capability of fire fighters to let others on the fireground know that they are in trouble and need assistance may have possibly averted approximately one-third of the 41 deaths reported while fighting fires.

It is evident that the fire fighter needs the capability to contact other workers at the emergency scene when he is in need of assistance. Due to the expense of equipping each fire fighter with a portable two-way radio, the need was to find an inexpensive mechanism that could summon help.

The recognition of the need for PASS led the National Fire Protection Association's (NFPA) Technical Committee on Protective Equipment for Fire Fighters to form a subcommittee in 1980 to develop a voluntary consensus



performance standard for such devices. In 1983, NFPA adopted NFPA 1982: *Standard on Personal Alert Safety Systems (PASS) for Fire Fighters*. The standard was revised five times, and the current edition is the 2007 Edition.

The purpose of the NFPA standard was to develop comprehensive minimum performance criteria, functioning and test methods for devices which can be worn by fire fighters that emit an audible alarm signal in order to summon assistance in the event that the fire fighter becomes incapacitated or needs assistance. The testing procedures outlined in NFPA 1982 are designed in order to simulate the type of adverse environmental and operational conditions to which fire fighters are frequently exposed. . All PASS must meet the current edition of NFPA 1982; it further recommended that OSHA advise fire fighters to use PASS that are integrated as part of the SCBA.

**Question 9 (continued):** Are there additional features of a personnel accountability system, other than these safety devices, that should be an element of an emergency response system?

**IAFF Response:** PASS cannot and does not substitute for good fireground and incident command and communication to ensure that the location of each fire fighter is known at all times. While the addition of a PASS does not guarantee safety, it is an important component to the fire fighter's personal protective. New OSHA regulations should make provisions for different ways for fire departments and other emergency response organizations to implement appropriate systems of emergency scene accountability that address both the use of devices and the establishment of appropriate administrative procedures.

**IAFF Response:** Only if the ensemble meets the specific requirements for proximity garments as contained in NFPA 1971. The former requirements of NFPA 1976 (*Standard on Proximity Fire Fighting Protective Ensemble*) were combined with structural fire fighting protective clothing requirements in NFPA 1971. The new NFPA 2007 now distinguishes specific requirements that apply to structural and proximity fire fighting protective clothing, structural fire fighting protective clothing alone, and proximity fire fighting protective clothing alone. There are significant additional requirements that apply to proximity fire fighting protective clothing that define performance of this clothing against high levels of radiant heat and address specific unique design features of a clothing ensemble that are necessary to protect against the hazardous of proximity fire fighting. Proximity fire fighting operations involve fires producing very high levels of conductive, convective, and radiant heat such as aircraft fires, bulk flammable gas fires, and bulk flammable liquid fires. Structural fire fighting garments will not provide protection from such hazards.

**IAFF Response:** Only if the ensemble meets the specific requirements for proximity garments as contained in NFPA 1971. Proximity fire fighting operations

involve fires producing very high levels of conductive, convective, and radiant heat such as aircraft fires, bulk flammable gas fires, and bulk flammable liquid fires. Structural fire fighting garments will not provide protection from such hazards.

**Question 11:** Because NIOSH does not test SCBA for exposure to heat and flame, is this certification adequate?

**IAFF Response:** No. There are significant differences in SCBA performance during structural fire fighting that can only be demonstrated through the requirement for an overall SCBA flame and heat resistance test as implemented in the current 2007 edition of NFPA 1981.

**Question 12:** Would it be appropriate for all SCBAs used for firefighting or emergency response to be certified by NIOSH and also certified as compliant with the current edition of "NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) Emergency Services*"?

**IAFF Response:** Yes. The NFPA 1981 SCBA standard includes performance requirements consistent with the hazards associated with all hazard emergency response. This standard addresses a wide variety of specific performance requirements that are suitable for several different operational mission tasks.

**IAFF Response:** Yes. The current OSHA requirements addressing chemical protective clothing are over 20 years old; many of those requirements are not only out-dated, but many no longer apply. Furthermore, requirements under OSHA 29 CFR 1910.120 only establish criteria for chemical protective clothing that are considered Level A chemical protective suits. These criteria are minimal and describe more what the clothing should look like instead of establishing minimum performance criteria as addressed in NFPA 1991, *Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies*, and NFPA 1992, *Standard on Liquid Splash-Protective Ensembles for Hazardous Materials Emergencies*. OSHA has not defined criteria that sufficient define the material performance or overall integrity of chemical protective clothing to demonstrate how these PPE items demonstrate adequate protection to emergency responders.

**Question 13:** Is there any PPE for pre-hospital emergency medical service personnel (EMS), not currently required by the bloodborne pathogens standard or the respiratory protection standard (29 CFR 1910.134), which may be necessary to protect EMS employees (e.g., "NFPA 1999, *Standard on Protective Clothing for Emergency Medical Operations*")?

**IAFF Response:** Emergency response employers must provide their employees that provide medical care PPE that meets NFPA 1999. Again, federal

OSHA standards for bloodborne protection are not only out-dated, but they do not even provide any performance requirements and testing methods. NFPA 1999 establishes design, performance, and certification requirements for a range of protective clothing that affords emergency responders choices of different PPE for their given missions and emergency scene hazards.

**Question 14:** Is there any PPE for emergency responders providing technical rescue services (e.g., vehicle extrication, high angle rescue, swift-water rescue) that may be necessary for protecting employees providing such services?

**IAFF Response:** Yes. NFPA 1951, Standard on Protective Ensembles for Technical Rescue Incidents, 2007 Edition. The 2007 edition of this standard establishes requirements for three different types of ensembles that account for a range in technical rescue hazards and the potential for emergency responder contact with hazardous liquids (emergency scene chemicals and contaminated blood or body fluids) in addition to the potential of exposure to chemical, biological, radiological and nuclear (CBRN) hazards.

**Question 15:** Is NFPA 1951 an appropriate standard for OSHA to consider on the subject? Are there other standards that OSHA should consider?

**IAFF Response:** NFPA 1951 garments must be provided for those technical rescue incidents, beyond initial response, involving building or structural collapse, vehicle/person extrication, confined space entry, trench/cave-in rescue, rope rescue, and similar incidents. Protective clothing must also be available for other types of specialized rescue incidents, including swift water rescue, under water rescue, and wildland rescue. The NFPA is currently addressing these areas of PPE.

**Question 16:** Is there any other PPE, not already identified, that may be necessary for emergency responders or skilled support personnel?

**IAFF Response:** NFPA Standards on PPE ensembles and NIOSH CBRN respirator standards address the minimum PPE needs of fire fighters at an emergency scene. OSHA must address all the emergency response standards addressed in NFPA 1500, Standard on Fire Department Safety and Health Program as well as those standards now adopted by the US Department of Homeland Security.

**Question 17:** The OSHA Fire Brigade standard (29 CFR 1910.156(c)) contains broadly worded requirements on training and education and requires the quality of such training to be "similar to" a number of State fire training schools. Is this standard adequate to ensure fire fighters are appropriately trained to perform required tasks safely?

IAFF Response: No

If not, what level of initial training and qualification is necessary to safely perform fire fighting tasks? Is "NFPA 1001, Standard for Fire Fighter Professional Qualifications" an appropriate standard to consider?

IAFF Response: Yes for initial training as a qualified fire fighter.

Are there other standards or recommendations that OSHA should consider?

In addition to NFPA 1001: Standard for Fire Fighter Professional Qualifications, the following NFPA standards should be utilized as appropriate for the level of required qualification:

NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications

NFPA 1003: Standard for Airport Fire Fighter Professional Qualifications

NFPA 1005: Standard on Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters

NFPA 1006: Standard for Rescue Technician Professional Qualifications

NFPA 1021: Standard for Fire Officer Professional Qualifications

NFPA 1026: Standard for Incident Management Personnel Professional Qualifications

NFPA 1051: Standard for Wildland Fire Fighter Professional Qualifications

NFPA 1404 Standard for Fire Service Respiratory Protection Training.

What amount and type of periodic refresher training should be considered the minimum necessary for fire fighters?

IAFF Response: Minimum refresher training must be held annually and must reinforce all training based on the all hazard response. Further, the training of fire fighters needs to be through a recognized credentialing program. The Federal Emergency Management Agency has been addressing this issue and OSHA should reinforce their efforts and adopt as requirements their credentialing specifications.

Question 18: The U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA), develops the National Standard Curricula for all levels of EMS personnel. What level of initial occupational health and safety training and qualification is necessary to safely perform emergency medical services? Are there any additional initial training requirements beyond the NHTSA standards appropriate for OSHA to consider (e.g., training on emergency vehicle operation or incident scene safety)? What amount and type of periodic refresher training is necessary for EMS personnel? What are the current training practices in your workplace? What level of initial occupational health and

safety training and qualification is necessary to safely perform emergency medical services?

**IAFF Response:** The field provision of emergency medical services is often both time dependent and labor intensive. At a minimum there is a patient to lift and equipment to carry. Patient assessment and treatment requires physical contact with patients who may be sick or injured. Their illness may or may not be related to a disease process that could be communicable. Injuries the provider must assess may expose the responder to blood or other body fluids. Proper assessment and treatment must be provided in an appropriate time frame while balancing lifting techniques, infection control procedures, medication administration error prevention, and scene safety. Responders must also operate the vehicle to and from the scene in a safe manner. Because these factors are often time dependent responders must be able to make safe choices, using well established protocols, rapidly, intuitively and without error. The rapid safe, effective, and efficient operation of EMS resources is best supported by training and oversight. Training should include personal safety (scene safety/situational awareness, lifting techniques, infection control procedures, emergency vehicle operation). Actual EMS provider education, licensing or certification is currently managed on a state-by-state level, with individual regions or Departments adding to those requirements locally as necessary. Each jurisdiction elects or is assigned a level of EMS service provision. Entities that provide EMS must establish internal guidelines for safe operation based on the service level provided and the expected risks. For example, services that respond to EMS calls in vehicles should have at least an introduction to safe vehicle operation. Services that provide patient transportation as well should ensure all operators have had an opportunity to participate in a detailed emergency vehicle operation program. As another example, 'first responder' organizations that provide limited patient assessment and care should provide an introductory program on infection control procedures/universal precautions. Advanced life support providers that perform invasive procedures must receive ongoing training that focuses on management of patient blood and body fluids, communicable disease management, and proper handling of contaminated equipment. State EMS agencies may establish these educational goals locally, as requirement for licensure or certification. Current and draft NHTSA EMS education curricula address many areas related to the personal safety of the EMS provider/responder. Any OSHA requirements or training targets should be in sync with established national standard curricula as a baseline, with local jurisdictions enhancing that training based on locally identified risks. Training should be ongoing, in cycle with State licensure or certification protocols or national certification continuing education requirements.

**Question 19:** OSHA does not currently require any specific training for rescue technicians. What level of initial training and qualification is necessary to safely perform technical rescue tasks?

**IAFF Response:** NFPA 1006, Standard for Rescue Technician Professional Qualifications

Is “NFPA 1006, Standard for Rescue Technician Professional Qualifications” an appropriate standard to consider?

**IAFF Response:** Yes

NFPA 1006 establishes the NFPA minimum requirements necessary for fire service and other emergency response personnel who perform technical rescue operations. These include rope rescue, surface water rescue, vehicle and machinery rescue, confined space rescue, structural collapse rescue, and trench rescue. Are there other standards or recommendations that OSHA should consider?

**IAFF Response:** Yes, those specialty rescue operations addressing underwater rescue and wildland rescue.

What amount and type of annual refresher training should be considered the minimum necessary for such emergency responders?

**IAFF Response:** As stated above, refresher training should be conducted annually and training sessions must contain training exercises that are necessary to maintain the required level of competency.

What is the appropriate format for acquiring this training (e.g., does this require travel to a specialized training facility)?

**IAFF Response:** We believe that most training can be conducted on employer or regional employers’ facilities. Obviously, if these are unavailable travel will be required.

**Question 20:** What level of initial training and qualification is necessary to safely perform skilled support jobs?

**IAFF Response:** The IAFF believes in and has supported specialized training to ensure that support personnel know what emergency responders do and in turn, emergency responders know the capabilities of skilled response personnel. Such training must be developed and skilled response personnel certified to engage in supporting emergency responders at emergency incidents.

Should specific training for skilled support personnel, other than the initial briefing, be considered?

IAFF Response: Yes

Should refresher training on an annual or other basis for such responders be considered?

IAFF Response: Yes

The OSHA Training Institute has developed a 16-hour Disaster Site Worker Course (7600) which emphasizes knowledge, precautions and personal protection essential to maintaining an employee's personal safety and health at a disaster site. Should skilled support personnel take the OSHA Disaster Site Worker training course, or something similar, before responding to a disaster or is just-in-time training sufficient and appropriate?

IAFF Response: Yes

Question 21: Is there any training or qualifications on emergency vehicle safety or incident scene safety?

IAFF Response: Yes. NFPA 1002 Fire Apparatus Driver/Operator Professional Qualification addresses such driver qualifications. The IAFF in cooperation with the US Fire Administration has also produced a comprehensive program addressing emergency vehicle response. This program can be found at: <http://www.iaff.org/hs/EVSP/index.html> .

Question 22: Should the training and qualifications for fire officers be different than for firefighters?

IAFF Response: Yes. NFPA 1021, Standard for Fire Officer Professional Qualifications.

If so, what level of training is appropriate for officers? Is "NFPA 1021, Standard for Fire Officer Professional Qualifications," an appropriate standard to consider in evaluating this issue?

IAFF Response: Yes.

NFPA 1021 identifies the performance requirements necessary to perform the duties of a fire officer and specifically identifies four levels of training that progress with increasing rank and increasing responsibility. Are there other standards or recommendations OSHA should consider?

IAFF Response: Yes. NFPA 1026: Standard for Incident Management Personnel Professional Qualifications.

**Question 23:** Should the minimum training and qualifications for industrial fire brigade members be different than for other firefighters?

**IAFF Response:** No, they should be trained on their employer's expectation of their all hazards response in their specific workplace. And if the industrial fire fighter is to perform the same tasks as an off-site fire fighter the required training must be the same. Additionally, as a minimum, all brigade fire fighters must meet the qualifying requirements found in NFPA 1081, Standard for Industrial Fire Brigade Member Professional Qualifications.

**Question 24:** While the Hazardous Waste Operations and Emergency Response Standard uses the term "safety official," the National Response Plan (NRP) and National Incident Management System (NIMS) use the term "safety officer." In practical application, is there a distinction between these two individuals or do they essentially perform the same function?

**IAFF Response:** Safety Officer is the typical fire department title given to an employee within a fire department or emergency service organization who performs the functions of a health and safety officer, an incident safety officer, or who serves as an assistant to a person in either of those positions. The requirements for the incident scene safety officer and health & safety officer are specified in NFPA 1521 Standard for Fire Department Safety Officer.

IAFF has no response to Questions 25 and 26.

**Question 27:** OSHA requires that hepatitis B vaccinations be made available to employees potentially occupationally exposed to blood or other body fluids in its bloodborne pathogen standard (29 CFR 1910.1030). Are other vaccinations necessary for emergency responders?

**IAFF Response:** Vaccinations would be necessary based upon exposure however; as a minimum first responders shall be vaccinated for Hepatitis A, Hepatitis B; Hepatitis A; Tetanus/diphtheria; Measles, mumps, rubella vaccine (MMR); Polio vaccine; Varicella and annual Influenza. Additionally, upon identifying the disease or a biological threat, all at-risk emergency responders must be provided appropriate prophylaxis when vaccinations are not available and within the appropriate time frame to prevent disease onset. Individuals receiving vaccination or prophylaxis will be provided with relevant information about side effects or symptoms to watch for as well as follow-up instructions. We are providing materials we developed for our members in response to national infectious disease issues.

**Question 28:** If vaccines other than the hepatitis B vaccination are determined by the employer to be necessary for emergency responders, should OSHA



consider non-disease specific administrative and record keeping procedures similar to those required for the hepatitis B vaccine (29 CFR 1910.1030(f))?

IAFF Response: Yes. Especially any vaccinations recommended by ACIP. See answer on 27.

Question 29: Is "NFPA 1582, *Comprehensive Occupational Medical Program for Fire Departments*" an appropriate medical evaluation for firefighters?

IAFF Response: Yes. All incumbent fire fighters must be evaluated to the requirements of this standard on an annual basis. Also, NFPA 1582 should be considered by fire departments as the appropriate standard for fire department candidates.

The current NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, is the 2007 edition, and includes a stringent standard for candidate fire fighters, as well as a more flexible guidance for medical determinations for incumbent fire fighters based upon the specific nature of their condition and the duties and functions of their job.

In short, medical determinations for incumbent fire fighters are highly dependent on the affected individual's particular circumstances. NFPA 1582, Section 9 does NOT provide a blanket prohibition that prevents an incumbent member who has a listed medical condition from continuing to perform the essential job tasks. It is important that the evaluating physician(s) have a clear understanding of the fire fighter's essential job requirements, capabilities, and history; and a dialogue regarding potential job accommodations should occur between the affected fire fighter, the fire department, and the evaluating physician.

Foremost, it is essential to recognize that the Standard was fundamentally developed for, and primarily intended, as guidance for physicians, to provide them with advice for an association or relationship between essential job functions of a fire fighter as an individual and his/her medical condition(s). This guidance should be utilized for the best approach towards an individual's risk assessment and management with respect to their medical issue(s) and particular job. Because the Standard is not a set of regulations, but rather a compilation of guidelines, the deciding authority for each individual is left to his/her physician. Therefore, especially with incumbent fire fighters, it is always important to consider what exactly the fire fighter does while on the job and how those particular tasks will affect his/her performance on an individual basis.

Further, NFPA 1500 requires that fire department employers provide the medical and fitness evaluations, contained in NFPA 1582, on an annual basis.

NFPA1582 also mirrors the IAFF/IAFC Wellness-Fitness Initiative. Both organizations worked with the NFPA Technical Committee responsible for this

standard to ensure that there were consistent medical requirements to evaluate fire fighters.

For emergency responders who **do not** perform firefighting tasks, what elements of a medical evaluation are necessary to assure that they are physically capable of performing essential job tasks while wearing an array of possibly physically burdensome personal protective clothing and equipment?

IAFF Response: Again, the requirements contained in NFPA 1582 would still be appropriate.

Question 30: Is on-scene rehabilitation and providing appropriate assistance (e.g., monitoring workers' temperature, blood pressure, hydration levels) an appropriate method of preventing or reducing the number of these injuries and fatalities?

IAFF Response: Yes.

Is "NFPA 1584, Rehabilitation of Members Operating at Incident Scene Operations and Training Exercises" an appropriate standard for such practices?

IAFF Response: Yes.

NFPA 1584 describes recommended practices for developing and implementing an incident scene rehabilitation program, including: Medical evaluations, re-hydration, and protection from environmental conditions. Are there other methods of protection that are available, such as adjusting work/rest regimens or physical training?

IAFF Response: Yes. The IAFF, in cooperation with the US Fire Administration, recently developed a manual on Fire Ground Rehabilitation. We are attaching a draft of that effort and we expect the final product to be released by the USFA after the first of the new year. These issues are addressed in this manual.

Should defibrillators (either a defibrillator or an automated external defibrillator (AED)) be available at emergency incident scenes in case an emergency responder or skilled support worker has a cardiac event?

IAFF Response: Yes and all fire fighters on that response must be trained and qualified to use these life saving devices.

Question 31: Is an incident management system appropriate for managing all other emergency incidents?

**IAFF Response:** Yes and clearly must be required regardless of the type or magnitude of the response.

**Question 32:** How can a safety management structure be developed that incorporates a multi employer response that is commanded within a single incident command system for all types of incidents?

**IAFF Response:** An ICS structure provides for levels of supervision beginning with the company officer (crew level). The crews from other employers, if trained and qualified in the ICS, will manage safely within a single command system. Without such structure, outside officers will basically be freelancing and the safety and health of their crews will be at risk.

**Question 33:** What are the non-emergency duties and functions that are necessary to assure the proper management of an emergency response and preparedness program? Is a designated safety program manager or administrator needed?

**IAFF Response:** This role and duties should be handled by the fire department health and safety officer.

**Question 34:** Do emergency responders need hazard detection and monitoring equipment capabilities, such as 4-gas monitors, thermal imaging cameras, or chemical, biological, and radiological detection equipment?

**IAFF Response:** Yes.

**Question 35:** Should emergency response organizations establish written standard operating procedures (SOPs) or standard operating guidelines (SOGs) for expected emergency response activities?

**IAFF Response:** Yes. Such SOPs are included in the requirements for NFPA 1500 and NFPA 1710, Standard on Fire Department Organization and Deployment.

**Question 36:** Is a certain type of communications hardware, such as radio systems, or handheld radios, needed by all emergency responders? Is there evidence that portable radios are necessary for either each individual emergency responder or each team of emergency responders?

**IAFF Response:** Yes. All emergency responders operating at an emergency scene shall be provided with portable radios.

**Question 37:** How can OSHA more thoroughly address the concept of risk management at emergency incidents? What guidance should be given in weighing the health and safety of emergency responders against victim's lives?

**IAFF Response:** By requiring employers to plan for, train, and equip their employees for an expected all hazard response.

**Question 38:** Would a health and safety program similar to that required in 29 CFR 1910.120(b) be appropriate for emergency response activities?

**IAFF Response:** Yes. This concept along with incorporating elements of NFPA 1500 should provide a worthwhile safety and health program for emergency responders.

**Question 39:** Are there any other issues or concerns related to the health or safety of all emergency responders, or any particular group of emergency responders, that should be considered? Are there any issues related to the health and safety of skilled support personnel at emergency incidents that should be considered?

**IAFF Response:** The IAFF believes that a comprehensive wellness and fitness program be required by all emergency response employers. Such programs are supported by the IAFF and the IAFC and recognized by many government agencies, including DHS and NIOSH. Both NIOSH and DHS recommend that all fire departments adopt the IAFF/IAFC Wellness-Fitness Initiative. The program manual is attached.

If the IAFF can provide any additional information or assistance, please contact us. Thank you for your consideration of our comments

Sincerely,



Richard M. Duffy  
Assistant to the General President