

# ***Total Fire E-News!***

## **HOLIDAY SEASON 2007**

- 1-Winter Fire Fighting Rehab!**
- 2-NFPA PPE Related UPDATES!**
- 3-Firefighters and Cancer!**
- 4-Product Feature: EZ Flips & Super Gloves!**

**(Our warmest and most sincere best wishes to all of our friends and families for a WONDERFUL Holiday Season and a healthy, happy and safe 2008...with a special prayer to all those serving in our ARMED FORCES... from the ENTIRE Total Fire Group Family!)**

### **1. Winter Fire Fighting Rehab!**

#### **Can You Pass the Fire Rehab Winter Test?**

Another festive holiday season is here. We hope you will use this time to focus on your family and friends that make your lives so meaningful. We also know it is the time for us to see more structure fires and carbon monoxide responses; 'tis the season for candles, overloaded electrical circuits, supplemental heating sources and creosote in chimneys.

With some planning and preparation, you can minimize the risk of cold weather exposure for first responders. Cold weather increases risk factors associated with fire fighting. The constant exposure to Mother Nature's brutal side takes its toll on personnel and machinery.

Ensure that you are wearing the proper layers of clothing. Keep extra dry socks, caps and sweatshirts with you as you roll out. And throw a tube of lip balm in your gear bag along with some petroleum jelly to smear on any exposed skin.

Too cold to train outside today? Get the crew together to review your department SOGs on winter operations.

Here's a winter quiz on some winter rehab procedures:

#### ***1. What warms you up the most during a winter shift?***

- A. Riding on the tailboard and pulling the hose bed cover over your head.
- B. Placing your hands and arms on the diamond plated doghouse, while riding backwards in the jump seat.
- C. Wearing your turnout gear outside while shoveling snow or going for groceries.
- D. Eating Texas style chili with extra hot sauce.
- E. Reporting to the rehab sector for proper warming.

***2. A cold-induced condition caused by the formation of ice crystals on exposed body parts, which occurs when extremities such as hands, feet, ears, and nose are exposed to cold for extended periods of time, is:***

- A. Hyperthermia
- B. Hypothalamus
- C. Frosty the snowman
- D. Probiementia
- E. Frostbite

**3. You can prevent cold stress conditions with the following measures:**

- A. Wearing multiple layers of light, loose-fitting clothing.
- B. Paying particular attention to protecting feet, hands, face and head.
- C. Reporting any cold-stress related symptoms that you are suffering.
- D. Remaining hydrated and refueling your energy with food.
- E. All of the above are true and beneficial.

Hopefully, you selected E on all of the responses. Since most of the country experienced a hotter and drier summer than usual, let's see what Old Man Winter will deliver. Regardless of your work location, it is important to review some recommendations so as to avoid any "freeze-ups." In times of bitter cold, rehab in a warm spot is essential. **Written by Perry Denehy M.Ed., ATC/L., the Director of Sports Medicine for the Sycamore Community School District in Cincinnati, Ohio, and has nearly 30 years of Fire/Rescue and EMS experience.**

## **2-NFPA PPE RELATED UPDATES!**

**Make sure YOUR FIREFIGHTERS are PROTECTED with the correct selection, care, and maintenance of their bunker gear & PPE as required by NFPA 1851.**

To provide the necessary protection for firefighters, careful selection of the appropriate ensemble and its correct care and maintenance are essential. **The 2008 edition of NFPA 1851 embraces two fire fighting protective ensembles that are certified as compliant with NFPA 1971: Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.** Up-to-date requirements in the 2008 edition specify the proper selection, care, and maintenance of fire fighting ensembles including coats, trousers, helmets, shrouds, hoods, gloves, and footwear elements.

**Rules cover inspections, cleaning and decontamination, repairs, storage, and recordkeeping. Important changes in this edition:**

- **A new Section 4.6 in Chapter 4 addresses personal protective equipment health and safety concerns.** Supporting Annex material is also included.
- **Revised and rewritten Chapters 6, 7, and 8,** with new corresponding Annex material that provides guidance and suggested checklists for inspection, cleaning and decontamination, and repair activities.
- **Revised rules in Chapter 10 that require ensembles be retired not more than 10 years from the date ensembles or ensemble elements were manufactured.** New supporting Annex material helps departments determine a program for ensemble retirement.
- **New Chapter 11 with requirements for Independent Service Providers (ISPs)** who provide one or any combination of advanced inspection, advanced cleaning, or repair services. ISPs are required meet the requirements specified, and compliance must be verified by a third party certification organization.

- **New Chapter 12 provides requirements for test methods** to be used by the organization or the ISP responsible for ensemble elements. Provisions address the evaluation of liner composites, moisture and thermal barrier liners, and moisture barrier water penetration.

Have questions related to your PPE and the revised *NFPA 1851* changes? Contact your Total Fire Group Regional Director, Inside Marketing Associate or local dealer by calling us at 1-800-688-6148 today!

## **DO YOU PROVIDE RESCUE SERVICES?**

### **Check out the New CHANGES with the NFPA 1951 Standard on Protective Ensembles for Technical Rescue Operations 2007 Edition.**

There are a lot of changes in the new edition of NFPA 1951, the most obvious of which is the name. In changing the name of the Standard from USAR Operations to **Technical Rescue Operations**, the NFPA 1951 Committee was trying to clarify that “the Standard applies to all emergency incident operations, not just to USAR (Urban Search and Rescue) teams of state or federal governments.” The expansion of the scope of potential users of this Standard to all disciplines of first responders is reflected in a number of the requirements throughout the Standard. An example of this cross disciplinary consideration is best seen in the Standards approach to trim on all garments, which in the 2007 edition is optional on all ensembles.

**The biggest change in the new NFPA 1951 Standard is the introduction of 3 different types of technical rescue ensembles with increasing levels of protection, where in the previous edition there was just 1 ensemble.** Per the standard these ensembles are:

- (1) A **utility** ensemble, which provides protections from physical hazards, a basic flame resistance for the ensemble and the elements of the ensemble and a high level of “breathability” of the ensemble to reduce heat stress for the wearers.
- (2) A **rescue and recovery** ensemble, which provides the physical protection of the utility ensemble and a bloodborne-pathogen barrier to protect wearers from body fluid infection from injured or deceased victims.
- (3) A **CBRN** ensemble, which in addition to all of the protections of the rescue and recovery ensemble, provides limited protection from chemicals, biological agents, and radiological particulates during incidents involving chemical warfare agents or weapons of mass destruction.

The NFPA committee designed these protective ensembles so that each level encompassed all of the protective properties of the previous level and then enhanced them with additional requirements. Ensemble elements certified to NFPA 1951 2007 edition will be designated a specific level of certification within the Standard and that level will appear on all certification labeling.

The elements included in the NFPA 1951 Standard of the utility ensemble are garments, helmets, boots, gloves and goggles. This Standard does not specify respiratory protection levels for either the utility or rescue and recovery ensembles. It is important to remember that all design elements and testing requirements associated with this Standard are listed as the minimum requirement needed to meet this certification.

**Contact your Total Fire Group Regional Director, Inside Marketing Associate or Local Dealer for additional information today at 1-800-688-6148.**

## 3-FIREFIGHTERS AND CANCER

As we have discussed here before in *TotalFireE-News*, University of Cincinnati (UC) environmental health researchers have determined that firefighters are significantly more likely to develop four different types of cancer than workers in other fields. Their findings suggest that the protective equipment firefighters have used in the past can be improved upon in protecting them against cancer-causing agents they encounter in their profession. Unfortunately, firefighters failing to use and properly wear their PPE as designed may have also contributed to the issues related to cancer.

The researchers found, for example, that firefighters are twice as likely to develop testicular cancer and have significantly higher rates of non-Hodgkin's lymphoma and prostate cancer than non-firefighters. The researchers also confirmed previous findings that firefighters are at greater risk for multiple myeloma.

As you may well know, firefighters are exposed to many compounds designated as carcinogens by the International Agency for Research on Cancer (IARC)—including benzene, diesel engine exhaust, chloroform, soot, styrene and formaldehyde, researcher Dr. Grace LeMasters explains. These substances can be inhaled or absorbed through the skin and occur both at the scene of a fire and in the firehouse, where idling diesel fire trucks produce diesel exhaust.

"Firefighters work in an inherently dangerous occupation on a daily basis," LeMasters adds. "As public servants, they need—and deserve—additional protective measures that will ensure they aren't at an increased cancer risk."

The UC-led team analyzed information on 110,000 firefighters, most of them full-time, white male workers, from 32 previously published scientific studies to determine the comprehensive health effects and correlating cancer risks of their profession.

Risk for 20 different cancers was classified into three categories—probable, possible or not likely—patterned after the IARC's risk-assessment model.

UC epidemiologists found that half the studied cancers—including testicular, prostate, skin, brain, rectum, stomach and colon cancer, non-Hodgkin's lymphoma, multiple myeloma and malignant melanoma—were associated with fire fighting to varying levels of increased risk.

"There's a critical and immediate need for additional protective equipment to help firefighters avoid inhalation and skin exposures to known and suspected occupational carcinogens," says Lockey, professor of environmental health and pulmonary medicine at UC. "In addition, firefighters should meticulously wash their entire body to remove soot and other residues from fires to avoid skin exposure."

## A POSITIVE SOLUTION:

A BRAND NEW bunker gear ensemble, able to protect firefighters additionally against chemical and biological toxins has been in the field for the past year. This BUNKER GEAR known as Project HEROES (Homeland Emergency Response Operational and Equipment Systems), was developed through a federal government contract from the Technical Support Working Group (TSWG) with

funding from the Department of Homeland Security, and the IAFF teamed with the International Association of Fire Chiefs, NIOSH, University of Massachusetts and University of Arkansas, along with Total Fire Group/Morning Pride Manufacturing.

With the mission to produce gear that would move toward all-hazards protection, the International Association of Fire Fighters, leading the team, developed **PROJECT HEROES**.

IAFF Assistant to the General President for Health and Safety and Medicine, Mr. Rich Duffy, said their goal was to follow the look and function of current structural fire fighting gear and keep the additional CBRN protection passive; nothing other than donning the gear would be necessary. As a part of this additional protection, the classic carcinogens that are typically found at nearly any fire that impact firefighters' health are minimized as well.

#### **FEATURES OF PROJECT HEROES:**

- =The hood is always deployed, sealed together with the coat at the collar line. It is constructed of outer shell, moisture barrier, and thermal liner. A flexible gasket seal designed to fit SCBA is built into the hood.
- =The coat closure zipper extends upward to seal hood around face piece.
- =The coat has a FIN liner attachment that creates a baffle that allows sealing with a vapor tight zipper.
- =The gloves interface with the coat sleeves with a magnet gasket seal. Lateral locks prevent disengagement but detach with twisting action.
- =A power lock strap provides coat to waist high pant interface seal. A built in collapsible fly eliminates the need for a zipper closure on the pants.
- =Sock-like bootie liner extension from the pant leg fits into boots that accept the bootie. A flap over the top of the boot prevents liquid leakage, keeping feet 100 percent dry.
- =An innovative system captures the SCBA exhalation feeding into a duct system in the coat. It provides positive pressure against exterior penetration and an upper torso cooling system.

With the moisture barrier being the key sealant for exterior penetration, it permits the use of various outer shell and thermal barrier materials. The capturing of the exhaled air is then circulated in the coat to act as a cooling system since in general fire fighting conditions, outside temperatures surpass the temperatures of that air.

The goal was to create certified protective clothing that is as indistinguishable as possible from current structural fire fighting gear, but still offers improved chemical, biological, radiological, nuclear and fire fighter health protections, without sacrificing thermal protection, comfort and functionality needed daily by Fire Fighters.

***While originally focused on protecting fire fighters initially arriving at potential terrorist-related events, additional research will also allow fire fighters to receive enhanced protection and potentially minimize their risks to cancer causing products of combustion. We will keep you well informed as PROJECT HEROES becomes available...as this EXCITING news is now an integral part of the war against FIRE FIGHTING CANCERS.***

***For additional information on PROJECT HEROES, go to:***

<http://www.firehouse.com/news/2005/ppe.html>

<http://www.totalfiregroup.com/pdfs/ProjectHeroes.pdf>

## **FIRE FIGHTER CANCER SUPPORT:**

Do you know a FIRE FIGHTER with cancer? The IAFF and the IAFC have both partnered with the FIRE FIGHTER CANCER SUPPORT NETWORK (FCSN) to provide timely assistance to all fire service members and their families in the event of cancer diagnosis.

The FCSN maintains and continuously updates a roster of mentors who have personal experience with many types of cancers who will personally guide other Fire Fighters and their families through the process of dealing with their specific illness. In addition to their mentor program, they are always in need of volunteers to assist by helping to support the various committees, specialized task programs, member support activities and specialized events they are asked to attend.

The FCSN also provides awareness to fire service members and their families about the importance of cancer prevention and screening by coordinating educational opportunities and various health programs.

While FCSN does not provide legal or medical advice, they can provide assistance and guidance for other support options such as behavioral health services, fire service organizations, Fire Service Chaplains, and other cancer support programs. The FCSN is in collaboration with the American Cancer Society, the Lance Armstrong Foundation, the IAFF and the IAFC.

For more information on the Firefighter Cancer Support Network, go to:

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

## **TOTAL FIRE GROUP PRODUCT FEATURES!**

### **EZ-FLIPS...EZ FIREFIGHTER PROTECTION!**

We introduced NFPA 1971 certified EZ-Flips at the 2007 FDIC show in Indianapolis. They were enthusiastically received, and new orders have been pouring in! We have also received many replacement orders, as firefighters are installing them on their Ben 2 Plus helmets. All firefighters and dealers at the show agreed that the new NFPA certified EZ-Flips were visually and operationally indistinguishable from non-certified EZ-Flips. Our engineering efforts to make the transition seamless were, we believe, critical to making this product well received and we were glad we were able to deliver on that promise. **REMINDER: Morning Pride EZ-Flips are only to be used and are only certified when used on Morning Pride helmets.**

Features and benefits of this new product include: no fogging problems; works perfectly with glasses; no nose digs; no accidental creeping down the face; easy to deploy with a single finger of a gloved hand; perfect position, perfectly out of the way or perfectly deployed, no adjustments needed; and no ear cover interface problems (Patent Pending).

Available on Morning Pride's Traditional Ben 2 Plus and Modern Lite Force Plus helmets. For more information, contact your Morning Pride Helmet dealer or Total Fire Group at 1-800-688-6148.

# SUPER GLOVES PROVEN!

American Firewear first introduced the Super Glove (Patented and Patent Pending) at FDIC and it was a huge hit that has now made it amongst the **MOST POPULAR FIRE FIGHTING GLOVE EVER INTRODUCED!**

Raising the bar in a new era of dramatically improved fire fighting hand protection, the Super Glove delivers phenomenal dexterity with enhanced protection. Features of this new **"Made in the U.S.A"** glove include: true 3D hand shaped styling with staggered layer seaming; Bubble-Flex and Flex-Tuck construction with dead air spacer ridges; Digiroo™ high grip palm and fingers; Air Spacer™ thermal architecture traps air for thermal protection without traditional bulk; ultra thin, ultra strong Kangaroo back outer shell; Crosstech® Moisture Barrier; Berry Compliant; available in wristlet and gauntlet styles; 8 regular sizes and 6 cadet sizes: NFPA 1971, 2007 edition compliant; now building stock for quick shipments.

**PROTECT YOUR HANDS!** While for years, the "firefighter's glove" was (for a variety of reasons) not a high priority, firefighters have come to realize the critical importance of superior hand protection while operating at a fire emergency. Other gloves on the market may look cool or feel very light-but DO NOT PROVIDE the level of protection equal to the situation firefighters are operating in. The SUPER GLOVE, specifically designed by FIREFIGHTERS FOR FIRE- FIGHTERS for INTERIOR FIRE FIGHTING operations, greatly enhances a fire- fighter's ability to operate while providing the needed, critical protection.

For more information on the Super Glove, contact your American Firewear dealer or Total Fire Group at 1-800-688-6148.

**On behalf of all of us at Total Fire Group-we wish you and yours a happy, safe and healthy 2008 and look forward to seeing you soon!**

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