

## PPE for Women We've Come A Long Way, 'Rosie,' But We Still Have A Ways to Go

By Joseph L. Walker

International Safety Equipment Association

In the World-War-II-era "We Can Do It!" poster, a female factory worker commonly — albeit mistakenly — called "Rosie the Riveter" is not wearing a single piece of personal protective equipment (PPE) nor a stitch of protective clothing.

More than half a century after that iconic poster appeared, a U.S. Occupational Safety and Health Administration (OSHA) advisory committee heard complaints about ill-fitting PPE and garments that were being provided to women in non-traditional jobs. Their 1999 report<sup>1</sup> determined that poor-fitting protective equipment and clothing frequently did not function in the manner for which it was designed; accordingly, protection that the gear was supposed to deliver was compromised — leading to serious health and safety risks for women in those trades.

Fast-forward another 11 years and the situation with regard to PPE and protective clothing for women has improved dramatically. Hundreds of products designed with women in mind now are available from manufacturers and distributors.

"Industries have often adjusted to meeting the needs of women," said Terri Sandu, founder of the Cleveland-based Hard-Hatted Women, who added that whole businesses have devel-

oped with the recognized need for safety equipment designed, sized and styled with women in mind.

Hard hats in various shades of pink can be seen in almost every construction zone and other hazardous worksite in America. Male workers' catcalls have subsided, in some cases because the pink hard hats are worn by the people in charge. In fact, 40 percent of the women in construction run their own businesses, and construction accounts for the largest growth in new women-owned business, according to a *Wall Street Journal* report.<sup>2</sup>

At least one online distributor that focuses solely on safety equipment and tools for women has been established to serve this growing market. At the same time, there is still room for improvement — in terms of the variety of equipment that is readily available and freeing up the pipeline that delivers that equipment to hard-working women.

### Manufacturers Recognize Women's PPE Needs

"Manufacturers understand that there are women working in all industries who require PPE," said International Safety Equipment Association (ISEA) President Dan Shipp. "They make products that are designed and sized for women, but often safety directors and employers need to look for these products and not just expect everyone in the company to wear the same thing.

"A number of years ago, ISEA sponsored a display of PPE for women at a union-sponsored conference in Washington. We discovered that a lot of workers just didn't know that there were products available in different sizes and configurations for women. There are plenty more of them available now than there were then."

While acknowledging that manufacturers now offer more safety gear for women and a better variety of it, Terri Piasecki, owner of Apex, N.C.-based online women's safety equipment distributor [www.charmandhammer.com](http://www.charmandhammer.com), believes that political correctness, size concerns and supply chain issues all play roles in constricting the pipeline that delivers PPE for women. ▶30



ILLUSTRATION BY SAM FERRO

### INSIDE: FIVE THINGS TO MAKE YOU SMARTER ABOUT PROTECTING WORKERS

- 31 Get the straight scoop on updated high-visibility apparel standard
- 34 Learn about help from NIOSH to address construction challenges
- 35 Scan innovative services from ISEA members
- 35 View OSHA videos that guide healthcare workers on respirator use
- 38 Find answers to questions about gas monitor calibration

## Women's eyewear from...



### ABOUT THE AUTHOR

Joseph L. Walker is marketing communications advisor to the International Safety Equipment Association and has been editor of *Protection Update* since its inception in 2000. He is a member of the American Conference of Governmental Industrial Hygienists. Reach him at [jwalker@safteyequipment.org](mailto:jwalker@safteyequipment.org) or 703-491-3301.

### PPE FOR WOMEN

from page 29

She cites some fall protection manufacturers' unwillingness to promote products as being designed especially for women as one example of political correctness: "Most manufacturers have models available for smaller workers, some recommend the cross-over chest styles for women, though they don't actually say they are for women in the catalogs," she told a meeting of the U.S. Mine Safety and Health Administration's PPE Subcommittee.<sup>3</sup>

Piasecki notes that eye, hand and foot protection and high-visibility and protective apparel are areas where taking products that were designed initially for men and then reducing their size does not necessarily make them suitable for women. In addition to the obvious differences, anthropometric studies show that women typically have shorter arms, more flexible hips and more slender hands and feet, and their faces are shaped differently. All these attributes should be taken into account when designing products for women.

### Some Women 'Make Do'

Unfortunately, women requiring PPE sometimes either are forced to or choose to "make do" and wear equipment designed for men, according to the Ontario Women's Directorate and Industrial Accident Prevention Association.

"Some women, particularly those who work in all-male sites, are reluctant to draw attention to their special needs," the group notes in its *Personal Protective Equipment For Women* report.<sup>4</sup> "The result, ill-fitting protective equipment can jeopardize the health and safety of female workers and their co-workers."

Here are three pertinent examples cited in the Canadian report where smaller just does not necessarily work:

- A woman with a small face wears goggles available in the shop. The gaps they leave at her temples allow flying debris from her machine to enter her eyes.
- A woman who wears boots designed for men's feet complains of tripping while walking or climbing stairs or ladders. She suffers from blisters and burning on the soles of her feet.
- A woman's hands are smaller — she has shorter, narrower fingers, and a smaller

palm circumference — so even a man's small glove often does not fit.

Melina Harris, president of Kent, Wash.-based Sisters in the Building Trades, told *Safety + Health* magazine recently:<sup>5</sup> "Rigging PPE to fit with rubber bands, duct tape, etc., is still very common. I and many women and smaller men buy their own or rig what they get."

### Improving Access to PPE for Women

Concerning the supply chain, charmandhammer.com's Piasecki said: "[P]roducts sit at the manufacturer until a wholesale distributor agrees to carry them and places an order. A product line that (appeals only to) women typically will not be stocked at the wholesale distributor level, which in turn makes it difficult for retail distributors to promote that line.

"[D]istributors will special order, but that usually takes two or three weeks to come in. Three weeks is a long time to wait for safety equipment. The old saying 'You can't sell what you don't have' still rings true. Then manufacturers see that the women's gear isn't moving and, in some cases, they discontinue it before anyone knew it even existed."

ISEA currently is working with an OSHA advisory committee to provide information about and access to personal protective equipment that is sized, designed and styled for women. The Women in Construction Work Group of OSHA's Advisory Committee on Construction Safety and Health is looking for ways to make employers, employees and OSHA itself aware of the availability of PPE for women. (See "Washington Watch" column in this issue of *Protection Update*.)

As ISEA continues this work to ensure that hard-working women everywhere have access to the safety equipment they need, here is a small sampling of the numerous innovative products that ISEA member companies already design, size and style with women in mind:<sup>6</sup>

### Eye Protection

- **Encon Safety**, [www.enconsafety.com](http://www.enconsafety.com):
  - > Verratti® eyewear featuring pink or purple translucent color, wrap-around design and brow guard.
  - > XX safety eyewear, licensed by NASCAR®, with a square shape and logo on the temple.
- **Gateway Safety**, [www.gatewayafety.com](http://www.gatewayafety.com):
  - > Luminary® eyewear has a light-

## Protection UPDATE

News from the International Safety Equipment Association

### Protection Update

is intended for anyone who specifies, purchases or uses personal protective equipment, and those who regulate it.

**Protection Update** is available via ISEA's website, [www.safteyequipment.org](http://www.safteyequipment.org).

1901 North Moore Street  
Arlington, VA  
22209-1762 USA  
Telephone: (703) 525-1695  
Fax: (703) 528-2148

Daniel K. Shipp, President  
[dshipp@safteyequipment.org](mailto:dshipp@safteyequipment.org)

Joseph L. Walker, Editor  
[jwalker@safteyequipment.org](mailto:jwalker@safteyequipment.org)

**ISEA**  
INTERNATIONAL  
SAFETY EQUIPMENT  
ASSOCIATION

# Updated High-visibility Apparel Standard Includes Flame-resistance Criteria, Service-life guidelines

By **Cristine Z. Fargo**

International Safety Equipment Association

**A**n updated national consensus standard for high-visibility safety apparel from the International Safety Equipment Association (ISEA) now provides criteria and test requirements for garments marked as flame- or water-resistant, and includes service-life guidelines.

The *American National Standard for High Visibility Safety Apparel and Headwear* (ANSI/ISEA 107-2010) is the authoritative document for the design, performance specifications, and use of high-visibility apparel, including millions of vests, jackets, coveralls, trousers, rainwear and headwear, worn by workers in thousands of road construction, emergency response, forestry and other industrial and business settings.

This second update since ISEA published the first edition in 1999 was developed by ISEA's High Visibility Products Group and approved by key stakeholders. Though the revision does not change the long-standing requirements for compliant garments with respect to classification and color, it does address important issues for the wearer related to flame-resistance and performance of background materials used in the construction of rainwear.

"Due to their widespread use, high-visibility garments have evolved to address other needs of workers, such as flame-resistant properties," said Jim Teigen, chairman of the ISEA High-Visibility Products Group and business manager of OK-1 Manufacturing, Altus, Okla. "The inclusion of flame-resistance criteria as an optional feature is in direct response to end-user requests."

Additionally, the update calls attention to the service-life guidelines for high-visibility garments that have been established by the Federal Highway Administration (FHWA). "For this reason, users are encouraged to follow guidelines put forth by the FHWA and manufacturers to ensure that workers are being seen at all times, in all situations," Teigen noted.

In December 2009, the FHWA put in place regulations that require all workers to wear high-visibility apparel whenever they are exposed to moving traffic, work vehicles or construction equipment. The apparel must meet performance requirements spelled out in the ANSI/ISEA standard for high-visibility apparel and the ANSI/ISEA standard for high-visibility public safety vests.

The 43-page revised standard can be purchased from ISEA for \$62 a copy; discounts are available on bulk orders. For more information, visit [www.safetysafetyequipment.org](http://www.safetysafetyequipment.org). ●



**ABOUT THE AUTHOR**  
Cristine Z. Fargo is manager of membership and standards services for the International Safety Equipment Association. ISEA is accredited as a standards-developing organization by the American National Standards Institute. Reach her at [cfargo@safetysafetyequipment.org](mailto:cfargo@safetysafetyequipment.org) or 703-525-1695.

## Look for High-Visibility Apparel from ISEA Members

*Protection Update* readers are encouraged to specify high-visibility apparel that conforms to the *American National Standard for High-Visibility Safety Apparel and Headwear* (ANSI/ISEA 107-2010) from the following ISEA members:

- **3M Company**, [www.mmm.com/occsafety](http://www.mmm.com/occsafety)
- **Avery Dennison Corp.**, [www.reflectives.averydennison.com](http://www.reflectives.averydennison.com)
- **Blauer Manufacturing Co., Inc.**, [www.blauer.com](http://www.blauer.com)
- **Buckingham Manufacturing Co.**, [www.buckinghammfg.com](http://www.buckinghammfg.com)
- **Bullard**, [www.bullard.com](http://www.bullard.com)
- **ERB Industries**, [www.e-erb.com](http://www.e-erb.com)
- **Ergodyne**, [www.ergodyne.com](http://www.ergodyne.com)
- **FSI North America**, [www.fsinorth.com](http://www.fsinorth.com)
- **Honeywell Safety Products**, [www.honeywelllifesafety.com](http://www.honeywelllifesafety.com)
- **I. Spiewak & Sons, Inc.**, [www.spiewak.com](http://www.spiewak.com)
- **ICHANGE Inc.**, [www.thedus-t.com](http://www.thedus-t.com)
- **Iron Horse Safety Specialties**, [www.reflectivevest.com](http://www.reflectivevest.com)
- **Kimberly-Clark Professional**, [www.kcprofessional.com](http://www.kcprofessional.com)
- **King Tech Industry**, [www.reflectivetapes.com](http://www.reflectivetapes.com)
- **LaCrosse, Inc.**, [www.lacrossefootwear.com](http://www.lacrossefootwear.com)
- **Lakeland Industries, Inc.**, [www.lakeland.com](http://www.lakeland.com)
- **Logistical Services International, L.L.C.**, [www.lsisafetyapparel.com](http://www.lsisafetyapparel.com)
- **Lohmann & Rauscher, Inc.**, [www.lohmann-rauscher.us](http://www.lohmann-rauscher.us)
- **M.L. Kishigo Manufacturing Co.**, [www.mlkishigo.com](http://www.mlkishigo.com)
- **Magid Glove and Safety Manufacturing Co. LLC**, [www.magidglove.com](http://www.magidglove.com)
- **MCR Safety**, [www.mcrcsafety.com](http://www.mcrcsafety.com)
- **Mine Safety Appliances Co.**, [www.msanet.com](http://www.msanet.com)
- **NASCO Industries, Inc.**, [www.nascoinc.com](http://www.nascoinc.com)
- **OccuNomix International LLC**, [www.occunomix.com](http://www.occunomix.com)
- **OK-1 Manufacturing Co.**, [www.ok1-safety.com](http://www.ok1-safety.com)
- **Pacific Safety Supply, Inc.**, [www.dicketool.com](http://www.dicketool.com)
- **Reflexite Americas**, [www.reflexite.com](http://www.reflexite.com)
- **Safe Reflections, Inc.**, [www.safereflections.com](http://www.safereflections.com)
- **Tingley Rubber Corp.**, [www.tingleyrubber.com](http://www.tingleyrubber.com)
- **Transportation Safety Apparel**, [www.tsasafety.com](http://www.tsasafety.com)
- **Vizcon, LLC**, [www.viz-con.com](http://www.viz-con.com)
- **White Knight Engineered Products**, [www.intex.wkep.com](http://www.intex.wkep.com)
- **Williamson-Dickie Manufacturing**, [www.dickies.com](http://www.dickies.com)

## WASHINGTON WATCH

## ISEA Works with OSHA to Enhance Access To PPE Designed for Women

By Daniel I. Glucksman

International Safety Equipment Association

International Safety Equipment Association (ISEA) is working with a U.S. Occupational Safety and Health Administration (OSHA) advisory committee to provide information about and access to personal protective equipment that is sized, designed and styled for women.

The Women in Construction Work Group of OSHA's Advisory Committee on Construction Safety and Health (ACCSH) is looking for ways to make employers, employees and OSHA itself aware of the availability of PPE for women, as part of an effort to address the many issues related to women working in construction.

The ACCSH Women in Construction Work Group seeks to create a directory of suppliers of PPE for women construction workers, break down barriers that prevent women from working in construction, and post relevant studies about this topic.

The work group last year reached out to ISEA, and in December 2009, ISEA President Daniel K. Shipp addressed the group about

the wide availability of PPE for women from ISEA members and the association's mission to protect all workers. Following that presentation, ISEA provided to the ACCSH a list of PPE for women from member companies.

ACCSH has asked that OSHA create resource pages on its Web site where the advisory committees and their work groups could post information. The Women in Construction Work Group plans to have its own page containing information including where to find PPE for women.

OSHA has a key role to play, too. The agency must include in the construction regulations the General Industry requirement that employers have a duty to "[s]elect PPE that properly fits each affected employee" (29 CFR 1910.132(d)(1)(iii)). Sounds simple, right? The construction regulations at 29 CFR 1926.28(a) require that "The employer is responsible for requiring the wearing of appropriate personal protective equipment..." but there is nothing about fit. ISEA and the ACCSH Work Group have called upon OSHA to add the fit requirement to the construction regulations. ●

## Making Green Jobs Safe

As this article is written, ISEA plans to participate in OSHA's April 1 "Green Jobs" forum that is aimed at helping workers and small business employers understand the hazards posed by green jobs in construction, energy, and waste management and recycling. We are committed to working with our many partners to make certain that "green" jobs are safe jobs.

There's work to be done.

For example, President Obama has discussed rebates for homeowners who make their homes more energy efficient. There are various hazards associated with making homes (and other buildings) more energy efficient, including respiratory hazards associated with isocyanate, which comprises 50 percent of spray polyurethane foam (SPF) insulation.

A federal SPF working group, whose members include OSHA, National Institute for Occupational Safety and Health (NIOSH), Environmental Protection Agency, and the Consumer Product Safety Commission, notes that SPF is one of the fastest growing products in building and construction. However, isocyanates can lead to asthma and are potent lung allergens and irritants. In addition, polyols, the other half of SPF, have their own respiratory and vision hazards.

Given the situation, it is no wonder that OSHA announced a national emphasis program on isocyanates, and that OSHA and NIOSH are committed to making "green" jobs safe. ●



### ABOUT THE AUTHOR



Dan Glucksman is director of public affairs for the International Safety

Equipment Association, where he directs the legislative and regulatory program for the association and its product groups. His "Washington Watch" column is a regular feature of *Protection Update*. Reach him at [dglucksman@safetyequipment.org](mailto:dglucksman@safetyequipment.org) or 703-525-1695

## CONSTRUCTION CORNER



## NIOSH Establishes Office of Construction Safety and Health

The National Institute of Occupational Safety and Health (NIOSH) – [www.cdc.gov/niosh](http://www.cdc.gov/niosh) — has established a new Office of Construction Safety and Health, with Christine Branche, Ph.D., NIOSH principal associate director, serving as acting director of the new office.

Over 11 million construction workers build and maintain roads, houses, workplaces and physical infrastructure, NIOSH said. This work includes many inherently hazardous tasks and conditions such as work at height, excavations, noise, dust, power tools and equipment, confined spaces, and electricity. To address the special problems in construction, it is critical that NIOSH ensures rigorous coordination of our construction safety and health research the agency said. For more information, visit [www.cdc.gov/niosh/topics/construction/](http://www.cdc.gov/niosh/topics/construction/).

In related news, NIOSH announced a five-year, \$25-million cooperative agreement award to CPWR – The Center for Construction Research and Training, Silver Spring, Md., to serve as a leader in applied construction research, and disseminate effective interventions in the construction industry.

“We are pleased that CPWR will work with stakeholders and NIOSH to advance construction safety and health research,” said NIOSH Director John Howard, M.D. “They have a long and relevant history in the area, and we look forward to working with them.” The award to CPWR was based on competition resulting from the NIOSH National Construction Center Request for Application published in early 2009.

### Order Complete Set of ANSI/ISEA Standards at Deep Discount

ISEA is offering a complete set of its American National Standards and the use and selection guide for eye and face protection at 30% off the price of purchasing the publications individually. For \$325 including shipping, safety officers can get all the following publications in a convenient three-ring binder:

- American National Standard for **Limited-Use and Disposable Coveralls-Size and Labeling Requirements**, ANSI/ISEA 101-1996 (R2008)
- American National Standard for **Gas Detector Tube Units - Short Term Type for Toxic Gases and Vapors in Working Environments**, ANSI/ISEA 102-1990 (R2009)
- American National Standard for **Air Sampling Devices - Diffusive Type for Gases and Vapors in Working Environments**, ANSI/ISEA 104-1998 (R2009)
- American National Standard for **Hand Protection Selection Criteria**, ANSI/ISEA 105-2005
- American National Standard for **High Visibility Safety Apparel and Headwear**, ANSI/ISEA 107-2010
- American National Standard for **Air-Purifying Respiratory Protective Smoke Escape Devices**, ANSI/ISEA 110-2009
- American National Standard for **Fixed and Portable Decontamination Shower Units**, ANSI/ISEA 113-2008
- American National Standard for **High Visibility Public Safety Vests**, ANSI/ISEA 207-2006
- American National Standard for **Occupational and Educational Personal Eye and Face Protection Devices**, ANSI/ISEA Z87.1-2003
- American National Standard for **Industrial Head Protection**, ANSI/ISEA Z89.1-2009
- American National Standard - **Minimum Requirements for Workplace First Aid Kits and Supplies**, ANSI/ISEA Z308.1-2009
- American National Standard for **Emergency Eyewash and Shower Equipment**, ANSI/ISEA Z358.1-2009
- **Eye and Face Protection Use and Selection Guide**

Order directly from or download a faxable order form at [www.safetysupply.com](http://www.safetysupply.com).

### CSDA/OSHA Alliance Releases Electrical Safety Best Practices

The alliance between the Concrete Sawing and Drilling Association (CSDA) and U.S. Occupational Safety and Health Administration (OSHA) has released its fourth best practice, Electrical Safety (CSDA-OBP-1004), which includes guidelines and preventive maintenance tips that should be applied every workday.

Electricity is widely recognized as a potential workplace hazard, exposing employees to electric shock, burns, fires and explosions. Working on or around electrical conductors and equipment can be particularly dangerous because electrical energy often cannot be sensed until contact is made.

Find the document by visiting [www.csda.org](http://www.csda.org) and clicking on the “OSHA Alliance” logo.

### CPWR Updates Report on Preventing Crane-Related Deaths in Construction

CPWR also has published a revised updated report on “Crane-Related Deaths in Construction and Recommendations for Their

## MAKING WORKERS SAFER AROUND THE NATION

The following new services and innovations have been introduced by **International Safety Equipment Association** member companies to help make workers safer:

- From **Kimberly-Clark Professional** – [www.kcprofessional.com](http://www.kcprofessional.com) – are:

- > An interactive brochure that helps industrial manufacturing companies improve their worker protection, cost-effectiveness and sustainability at [www.kcprofessional.com/IMBrochure](http://www.kcprofessional.com/IMBrochure). The brochure offers product solution recommendations in maintenance and repair, warehouse, fleet maintenance, production and assembly, paint booth, laboratory, washrooms/wash stations, and break rooms. A similar brochure for metal manufacturing companies is available at [www.kcprofessional.com/metal](http://www.kcprofessional.com/metal).

- > Free program through which Kimberly-Clark Professional experts visit industrial facilities to help them identify more efficient and cost-effective options for issues ranging from what toilet tissue to use to what type of industrial wiper to use for different tasks.

- From **Sperian Protection** – [www.sperian.com](http://www.sperian.com) — are:

- > A “Culture of Safety” online resource center launched by its Uvex® flagship brand of eye protection. The Web site, found at [www.uvex.us](http://www.uvex.us), includes new tools, tips and expert insights from Uvex and other recognized industry leaders, making it easier for executive safety managers and employees to achieve a culture of safety, Sperian said.

- > A strategic partnership with **Prevent Blindness America** ([www.preventblindness.org](http://www.preventblindness.org)) to help reduce workplace eye injuries and promote a culture of safety. Together, the two organizations will develop an innovative nationwide safety leadership program to educate and certify workers.

- > A free case study that details how a Tennessee specialty forging and assembly operation was able to use in-ear dosimetry to break a cycle of hearing conservation behaviors and tactics that yielded minimal results and little real-world data. “Quiet-Dose™ In-Ear Dosimetry is a ‘Foundational Element’ of Dixie Industries’ Safety Program” is available at [www.hearforever.org/dixie](http://www.hearforever.org/dixie).

**The U.S. Occupational Safety and Health Administration** (OSHA) – [www.osha.gov](http://www.osha.gov) – has introduced two new videos for healthcare workers that feature guidance

on respirator and facemask safety. The “Respirator Safety” video demonstrates how to correctly put on and take off common types of respirators, such as N95s; “The Difference between Respirators and Surgical Masks” video explains how to prevent exposure to infectious diseases.

The videos also explain how workers can perform a user seal check to test whether a respirator is worn properly and will provide the expected level of protection. Viewers may watch both English and Spanish versions by visiting OSHA’s Respiratory Protection page on the U.S. Department of Labor’s YouTube site (<http://www.youtube.com/usdepartmentoflabor>).

OSHA also has published a new booklet outlining industry requirements for hexavalent chromium standards. Workers exposed to this toxic chemical can develop lung cancer and damage to the nose, throat and respiratory system.

Other new OSHA communications products include:

- An updated overview of medical screening and surveillance

requirements. *Screening and Surveillance: A Guide to OSHA Standards* pocket guide describes physical examinations and tests required to measure worker exposure to chemicals such as hexavalent chromium and benzene, and other workplace hazards such as noise and bloodborne pathogens.

- Three QuickCards™ that address worker safety topics in marine cargo handling operations. *Gangway Safety...* lists safety requirements for preventing falls from gangways; *First Aid...* explains workplace requirements such as assuring at least one person with a valid first-aid certificate is available at the terminal, and *Lifesaving Facilities...* lists safety requirements for equipment including personal flotation devices and Stokes basket stretchers.



**New online resources from Kimberly Clark Professional (above) and Uvex brand by Sperian**



**New offerings from OSHA include Respirator Safety videos on YouTube, Hexavalent Chromium standards guide, and QuickCards dealing with marine cargo handling**



# MAKING WORKERS SAFER AROUND THE NATION

continued

● An eTool that helps workers and employers comply with 29 CFR Part 1910.269, the *Electric Power Generation, Transmission and Distribution Standard*, to help prevent worker deaths.

**The National Institute for Occupational Safety and Health (NIOSH)** – [www.cdc.gov/niosh](http://www.cdc.gov/niosh) – has published new bilingual posters and cards that show proper disposable respirator use. Download or order copies of the English or Spanish versions of “How to Properly Put On and Take Off a Disposable Respirator” poster or card from the Web site.

Other new NIOSH communications products include:

- “A Systematic Review of the Effectiveness of Training & Education for the Protection of Workers,” which reports findings from a study by the Institute of Work and Health and NIOSH; the study determined that workplace safety and health training positively impacts workers.
- “The Cost of Fatal Injuries to Civilian Workers in the United States, 1992-2001,” which measures the economic loss to society from premature deaths of workers.
- “Emergency Response Resources” topics page that highlights NIOSH resources to help protect search-and-rescue teams, fire fighters and other responders against work-related injury and illness.
- A Web page that provides up-to-date information on the independent peer review of all NIOSH documents defined by the agency as being influential in terms of their potential impact on public policy or the private sector; the page provides links to all such NIOSH documents and to all independent peer-review comments for each.
- Safety training module on self-rescue and escape from underground mines, which builds on interviews with two miners who survived a 1968 coal mine disaster in Farmington, W.Va.

**The U.S. Mine Safety and Health Administration (MSHA)** – [www.msha.gov](http://www.msha.gov) – has launched a new outreach and enforcement program to prevent mining fatalities. “Rules to Live By” will spotlight the safety and health standards most frequently cited during fatal accident investigations through outreach efforts with the mining

industry, and focused enforcement by federal mine inspectors.

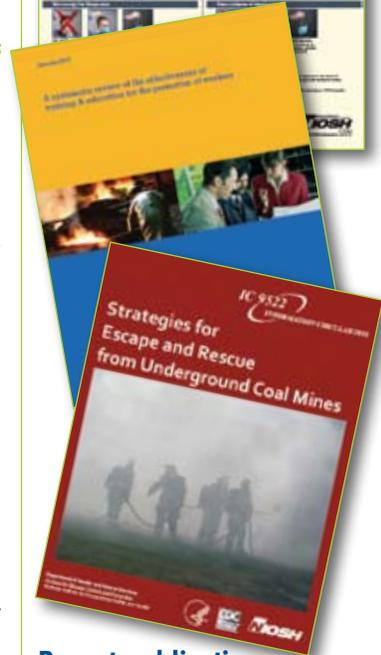
The fatality prevention initiative is being rolled out in two phases: industry outreach and focused inspections. During the first phase, MSHA disseminated information detailing the causes of the targeted fatal accidents to every mine operator, labor organization and state training grantee.

**New from the American Conference of Governmental Industrial Hygienists (ACGIH)** – [www.acgih.org](http://www.acgih.org) – is *Industrial Ventilation: A Manual of Recommended Practice for Design*, 27th Edition, which has been widely used by engineers and industrial hygienists since its first edition in 1951.

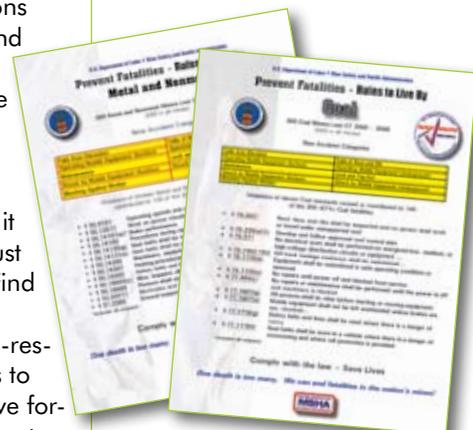
**New from the American Society of Safety Engineers (ASSE)** – [www.asse.org](http://www.asse.org) – is a voluntary consensus standard to address transportation-related incidents, which are still the number one cause of on-the-job deaths, ASSE said. *Work Zone Safety for Highway Construction*, ANSI/ASSE A10.47-2009, is aimed at protecting workers from injuries and illnesses that result from working in work zones, establishing safe work practices in work zones, and preventing vehicle crashes in work zones.

**The National Fire Protection Association’s (NFPA’s)** – [www.nfpa.org](http://www.nfpa.org) – Fuel Gas Code Committee has moved on an emergency basis to strengthen safety requirements in NFPA 54, National Fuel Gas Code, for purging of gas piping. This action follows urgent recommendations issued by the U.S. Chemical Safety and Hazard Investigation Board in the wake of a June 2009 explosion at the ConAgra Slim Jim plant in Garner, N.C. A tentative interim amendment would require the discharge of gas purging to be directed outdoors, and it identifies specific requirements that must be met during the purging process. Find details at [www.nfpa.org/54](http://www.nfpa.org/54).

NFPA also has launched new high-resolution digital catalogs to allow users to access information in a new interactive format. The first two catalogs released center around NFPA 70E, *Standard for Electrical Safety in the Workplace*® and NFPA 70, *National Electrical Code*®. ●



**Recent publications from NIOSH include bilingual respirator instructions; report on benefits of training and education on worker safety; training module on coal mine self-rescue**



**Downloadable posters on MSHA’s “Rules to Live By” initiative.**

## ISEA Website Offers Online Ordering



The International Safety Equipment Association's (ISEA's) enhanced Web site at [www.safetyequipment.org](http://www.safetyequipment.org) offers online ordering of safety equipment stan-

dards and other association publications, as well as direct links to a wealth of key information, including links via product categories to companies offering the types of safety equipment you need. The redesigned site also affords direct connections to "Standards," "News & Publications," "Resources," "About ISEA," "Product Groups," the "JobBase" for finding or posting jobs, and information on how companies can become members of the association.

## ISEA Statement Emphasizes Need to Validate Portable Gas Monitor Operability

Questions about the frequency and methods by which a portable gas monitor should be calibrated now are answered in an updated industry statement from the International Safety Equipment Association (ISEA).

This revised statement, first published in 2002, reflects current instrumentation technologies and monitoring practices, and seeks to reinforce the frequency and scenarios whereby a monitor's operability should be validated. The "ISEA Statement on Validation of Operation for Direct Reading Portable Gas Monitors" may be found at [www.safetyequipment.org](http://www.safetyequipment.org) or by requesting a copy at [info@safetyequipment.org](mailto:info@safetyequipment.org). ●

### REFERENCES

- <sup>1</sup> "Study and Recommendations by the Advisory Committee on Occupational Safety and Health Regarding Women in the Construction Workplace: Providing Equitable Safety and Health Protection," June 1999.
- <sup>2</sup> "Finally, Women's Wear for the Hard-Hat Set," *The Wall Street Journal*, May 17, 2007.
- <sup>3</sup> Postings from Terri Piasecki's "Charmandhammer's Blog," accessible from [www.charmandhammer.com](http://www.charmandhammer.com).
- <sup>4</sup> *Personal Protective Equipment for Women: Addressing the Need*, A Change Agent Project by the Ontario Women's Directorate and the Industrial Accident Prevention Association, 2006.
- <sup>5</sup> "Equity in PPE," *Safety + Health*, February 2010.
- <sup>6</sup> Contact ISEA's Joe Walker, [jwalker@safetyequipment.org](mailto:jwalker@safetyequipment.org), for an expanded list of companies that offer PPE designed, sized and styled for women.

### PPE FOR WOMEN

from page 30

weight frame and contemporary design with translucent temple inserts.

- > Scorpion® SM eyewear is 10 percent smaller than the regular product, and includes custom-fit features like adjustable length.
- > StarLite® SM and Starlight SM Gumballs eyewear are 10 percent smaller than the regular products.

- **Kimberly-Clark Professional**, [www.kcprofessional.com](http://www.kcprofessional.com), Jackson Safety brand Nemesis VI eyewear is lightweight and compact to fit a woman's features.
- **Magid Glove & Safety**, [www.magidglove.com](http://www.magidglove.com), Gemstone® Myst Y12CFC eyewear, which is a smaller version of the Y10 Myst series; it is designed for women and other workers with smaller facial features.
- **MSA**, [www.msanet.com](http://www.msanet.com), Safe & Sophisticated™ eyewear combines style and glamour with quality and durability.
- **Sperian Protection**, [www.sperian.com](http://www.sperian.com), W100, W200 and W300 series eyewear. The W100 is narrower with shorter temples; the W200 has a rose-colored frame that is narrower across the front with shorter temples, and the W300 has smooth-tapered temples.

### Fall Protection

- **Sperian Protection**, [www.sperian.com](http://www.sperian.com), the

Ms. Miller® harness specifically designed for the female worker with three unique features, (1) shoulder straps kept at the side and away from the chest, (2) front positioning loop and back/leg pads for better hip support, and (3) stretchable webbing so there is no bunching, binding or kinking.

### Hand Protection

- **MCR Safety**, [www.mcrcsafety.com](http://www.mcrcsafety.com):
  - > Powder-pink and pastel-green string knit gloves with different grip patterns; the powder pink glove sizes include medium, small and extra small, while pastel green comes in large, medium and small.
  - > For women's cut protection, MCR offers small and extra-small sizes in Dyneema and Kevlar gloves.

### Head Protection

- **Bullard**, [www.bullard.com](http://www.bullard.com), view a chart on the Web site to find hard hats in colors designed with women in mind.
- **ERB Industries**, [www.e-erb.com](http://www.e-erb.com):
  - > Americana safety helmet in rose pink, featuring a short peak and low-profile design, and certified when the suspension is installed in reverse position. ▶40



Ms. Miller harness

## OSHA \$100,000 CLUB OF SAFETY CITATIONS

The U.S. Occupational Safety and Health Administration (OSHA) has proposed penalties of \$100,000 or more for the following recent alleged failures to protect workers from potential hazards, including many that could have been avoided or mitigated by personal protective equipment (PPE). Companies have 15 business days from receipt of citations and fines to request and participate in informal conferences with OSHA or to contest the citations before the independent Occupational Safety and Health Review Commission:

- CES Environmental Services, \$1,477,500 for willful and serious citations, mainly involving the presence of flammable and combustible vapors, after an investigation into a fatal explosion at the company facility in Houston, Texas. In July 2009, an employee cleaning a tank was killed in an explosion when an altered a piece of equipment ignited flammable vapors inside the tank. Other citations involved failure to provide proper respiratory protection, confined space equipment and adequate fall protection.
- Three subsidiaries of Mueller Industries, Inc., Memphis, Tenn., \$683,000 for 128 citations at three facilities after an investigation into an incident at Mueller Copper Tube Co., Inc., Fulton, Miss.; a maintenance worker was killed and two others injured when naphtha leaked from an electric pump and ignited. Serious citations included fall hazards, and failure to establish a respiratory protection program.
- C.A. Franc, Valencia, Pa., \$539,000 after an investigation into the death of a roofing worker who fell 40 feet at a Washington, Pa., worksite. Owner Christopher A. Franc was cited for 10 per-instance willful citations for failing to protect workers from falls.
- CITGO Refining and Chemicals LP, Corpus Christi, Texas, \$236,500 for safety violations after an inspection of a catastrophic release of hydrocarbon and hydrofluoric acid at the facility; most citations resulted from failing to adequately repair and maintain process equipment.
- Home Goods, \$233,500 for 16 violations mainly involving exit access, fire and crushing hazards at its Commack, N.Y., store; OSHA had responded to an employee complaint.
- Hearthmark LLC, Dareville, Ind., doing business as Jarden Home Brands, \$217,500 in penalties at its Birmingham, Ala., location, mainly for violations involving lockout/tag-out procedures. The company makes fire logs under several brand names.
- Bullins Painting, Eden, N.C., \$187,500 following an inspection into the Aug. 7, 2009, death of a worker who fell 90 feet from a municipal water tower the company was painting in Epping, N.H. OSHA found that Bullins failed to provide the worker with fall protection.
- L. Perrina Construction Co. Inc., Methuen, Mass., \$166,950 after OSHA found employees at two Massachusetts work-sites exposed to cave-in hazards while working in trenches more than six feet deep.
- Endres Processing LLC, \$137,250 following an inspection that identified fire and explosion hazards from combustible dust at the company's Kansas City, Kan., operation that recycles inedible food products by milling them into feed for pigs and chickens.
- Birdsong Corp., Suffolk, Va., \$137,250 for 41 safety violations uncovered at company facilities in Sylvester and Blakely, Ga.; the inspection followed a fatality in which a worker was caught in a conveyor belt at the Blakely peanut operation.
- Atlanta Intown Granite Co., Atlanta, \$133,875 for continuing to expose employees to health hazards, mainly excess amounts of silica by not fully implementing a respiratory protection program, more than a year after OSHA had cited the company for similar violations.
- O.S. Interior Systems Inc., Houston, Texas, \$112,000 for safety violations following a fatality at a company worksite in Houston; the employee made contact with a live wire and died.
- Mustang Engineering L.P., Houston, Texas, \$112,500 for exposing workers to hazards during the construction of gas pipeline meter stations in Mississippi.

## Contempt Orders Issued against St. Louis Employer for Ignoring OSHA Citations

The U.S. Court of Appeals for the Eighth Circuit has issued contempt of court orders against Brian Andre, former owner of Andre Tuckpointing and Brickwork (AT&B), Andre Stone and Mason Work, Inc. (AS&MW), and Regina Shaw, owner of AS&MW, all of St. Louis, for failing to comply with court orders enforcing citations of the Occupational Safety and Health Review Commission (OSHRC).

The cases stem from numerous citations OSHA issued to AT&B and its successor, AS&MW, for willful, repeat and serious violations related to fall hazards, scaffolding erection deficiencies, power tool guarding and other hazards in connection with multiple projects in St. Louis. The court imposed sanctions, including payment by Brian Andrew, AS&MW and Regina Shaw of outstanding monetary penalties, which will continue to accrue interest, and other miscellaneous fees, in the current amount of \$258,582. ●

## CRANE-RELATED DEATHS

from page 34

Prevention." A re-review of the original 2008 report found 632 identified deaths involving cranes versus the initial total of 323 deaths. The report gives seven recommendations to prevent fatalities and injuries; download it free at <http://www.cpwr.com/research-cranereport.html>. ●

## SAFETY EQUIPMENT Works for You



### Gloves Protect Hand against Dropped Snowplow Blades

"On January 4, 2010, I was unloading snow plow blades when a bundle slipped and dropped on my right hand," recounted warehouseman George Kingsley in a note to MCR Safety. "The blades weigh 60 pounds each, and there are 10 in a bundle.

"When the glove was cut off, the doctor was amazed the fingers were still attached and there were not any broken bones. They said the gloves took most of the damage. I will continue to use your product for years to come.

"We sometimes take our hands for granted," Kingsley said. "That is until something like this occurs. As it is, I still have the use of all my fingers and will have full use of that hand within a few weeks. Again, thank you and your staff for a superior product."

For wearing the company's gloves in a situation that could have cost him the use of his right hand, Kingsley was honored with the "MCR Safety Quality of Life Award."

**Fasguard 900 series work gloves by MCR Safety, Memphis, Tenn., [www.mcrcsafety.com](http://www.mcrcsafety.com).**



### Chief Credits PPE with Saving Life of Arizona Fire Fighter

A metro Phoenix area fireman lived through a horrific mobile home blaze to fight another day thanks to his personal protective equipment.

Twenty-six-year-old Marcus Haynes was conducting a sweep of the burning mobile home on Oct. 13, 2009, when the fire flared up and flames swallowed him, FireRescue1.com reported. Haynes' gear saved his life, Buckeye, Ariz., Fire Department Deputy Chief Paul Carmen told Phoenix' KPHO-CBS 5 News.

"Is (his) coat functional anymore? No, but it served its purpose," Carmen said, adding that Haynes' gloves were hard as a rock, and that his breathing system remained intact.

"He did not have to inhale any toxic gases and/or superheated gases that would have likely killed him," Carmen reported.

Police at the scene said that the fireman suffered first- and second-degree burns on his hands and one arm, none of which was life-threatening, and he was treated at Phoenix' Maricopa Medical Center. ●

## PPE FOR WOMEN

from page 38

> Omega II safety helmet in high-visibility pink, and certified when the suspension is installed in reverse position.

- **Gateway Safety**, [www.gatewayssafety.com](http://www.gatewayssafety.com), Serpent™ vented safety helmet comes in colors including pink, orange, green, red and blue. The helmet suspension can be adjusted to fit a woman's head securely and comfortably.

- **MSA**, [www.msanet.com](http://www.msanet.com), V-Gard® protective helmets are available in three size options to accommodate women and other smaller-frame workers.

## Hearing Protection

- **Magid Glove & Safety**, [www.magidglove.com](http://www.magidglove.com), E2® IHP732 pink disposable earplugs in partnership with the National Breast Cancer Foundation.

- **Moldex-Metric**, [www.moldex.com](http://www.moldex.com), Meteors® Small earplugs in a new size to fit smaller ear canals; 100 percent PVC free, the soft, slow-recovery foam and contoured shape molds easily to the ear canal.

## Women-specific PPE from...

**Gateway Safety**



**Magid**



**Moldex-Metric**



**Gateway Safety**

## Protective Apparel

- **ArcStore.com**, [www.ArcStore.com](http://www.ArcStore.com), arc-rated ArcBra™, ArcPanty™ and ArcNet™ hairnet. The 100-percent Nomex® knit bra meets ASTM F1506, the company said, and is custom-sized for each customer; the panty incorporates a cotton crotch-lining for comfort, and the hairnet also meets ASTM F1506.

## Respiratory Protection

- **Gateway Safety**, [www.gatewayssafety.com](http://www.gatewayssafety.com), Peakfit® N95 disposable respirator with a unique design and adjustable one-piece head strap that provides a perfect fit for a woman's face, the company said.

- **Moldex-Metric**, [www.moldexmetric.com](http://www.moldexmetric.com), respiratory protection, with 95 percent of its products available in small sizes to better fit women's faces; the shell naturally contours to the face, avoiding constant adjustment.

- **MSA**, [www.msanet.org](http://www.msanet.org), Advantage® 200 LS respirator to meet the needs of women workers through fit and comfort in a small size. The AnthroCurve™ sealing surface provides virtually customized fit. ●