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Protection Update

is the newsletter for the ISEA Partnership for Worker Protection program. It is intended for anyone who specifies, purchases or uses personal protective equipment, and those who regulate it. *Protection Update* is distributed without charge, and also is available on ISEA's website www.safeteequipment.org.

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ISEA
INTERNATIONAL
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ASSOCIATION

Rebuilding the Pentagon: A Job Done Proudly, Swiftly and Safely for America



Education-based enforcement is key to PPE use at Pentagon renovation.

Florence J. "Flo" Meyers was about to leave her Northern Virginia home for a few days vacation on September 11, 2001, when she heard the horrific news that brought America to a standstill. She was one of millions in the Metro Washington, D.C., area who worried about the safety of loved ones working in the city after a hijacked airliner sliced into the western face of the Pentagon and threats of attacks on other Washington landmarks ran rampant.

But for Flo, the attack that cost the lives of 125 workers in the Pentagon and 64 aboard the aircraft struck terribly close to home. You see, since 1998 Ms. Meyers has been responsible for the safety of thousands of construction workers employed on a massive Pentagon renovation program; she is the safety officer for the entire project.

Five "wedges" and five

"rings" comprise the structure of the Pentagon — the world's largest low-rise office building. The hijacked plane struck Wedge 1, newly renovated and reoccupied, and traveled into Wedge 2, where the renovation was just getting underway. It caused extensive damage through the building's three outermost rings — C, D and E.

Ms. Meyers knew that those on her staff and contract workers could have been in harm's way when the attack occurred. Fearing

the worst and with most of Washington shut down, she spent that day and the next tracking down her workers, learning later that, thankfully, none had lost their lives or had even been injured.

Three days after the attack, Ms. Meyers returned to work with a renewed sense of purpose to ensure the safety of those workers who would be clearing the site and rebuilding better than new — an effort dubbed the Phoenix Project. With rescue and recovery operations completed, demolition of the damaged parts of the building began on October 18. Reconstruction started November 19 — the same day demolition was completed.

The entire \$501-million Phoenix Project will not be finished until 2003. However, Pentagon renovation managers set a goal to have Pentagon office workers

► 6

"Flo" Meyers



WHAT'S NEW IN SAFETY EQUIPMENT



M. L. Kishigo Hydrowick™

For the Whole Person...

From **M. L. Kishigo** are the Hydrowick™-Lite surveyor's vest, and the Ultralite™ adjustable high-visibility vest. The ANSI/ISEA 107 Class II compliant surveyor's vest features the new Hydrowick-Lite polyester fabric that wicks away perspiration while allowing the garment to dry several times quicker than cotton fabrics, the company says. The Ultralite vest also is Class II compliant, is available in lime, and features adjustable side closures and two pockets, and since it weighs only 2.5 ounces, combines coolness and comfort. 800-338-9480 or www.mlkishigo.com.

From **3M™ Occupational Health and Environmental Safety** is 3M Health and Safety Services (H&SS), a program designed to help organizations meet regulatory requirements and increase productivity by reducing related administrative, workers compensation and health care costs. The PPE services offer customers a review of various segments of their PPE programs against measures such as industry best practices and ANSI, NIOSH and OSHA standards. 800-328-1667 or www.3M.com/occsafety/services.

From **Safe Reflections** is Airex™ breathable reflective trim, which the company says meets U.S. standards for visibility for occupational work wear while addressing the need for increased durability, comfort and style. This technology allows air to flow through the reflective area. Airex trim is available in stock pattern or can be customized, according to the company. 800-773-8199 or www.safer-reflections.com.

For the Head, Face and Eyes¹...

From **AOSafety** is Metaliks™ safety eyewear, which features a new 10-base de-centered lens that provides excellent coverage, sleek styling and a polished, silverized metal frame, the company says. Metaliks spectacles have adjustable, soft nose-bridges, and formable spatula temples. DX™ anti-fog hard coat helps prevent fog-



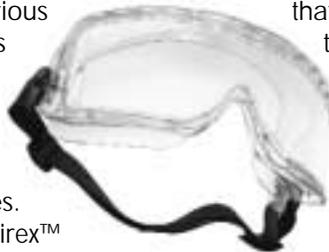
ging, scratching, static and chemical attack. 317-692-6599 or www.aearo.com.

From **Bacou-Dalloz** includes: Harley-Davidson® safety eyewear by Uvex Safety. There are five models suited for workers of all ages and most work applications, according to the company. The wrap-around frame has a blue-mirror lens engraved with the Harley-Davidson name, while the Harley-Davidson logo is on the front. 800-343-3411 or www.bacou-dalloz.com.



Bacou-Dalloz Harley-Davidson® eyewear

Willson® V-MAXX™ safety goggle, which the company says is ideal for safety programs that demand style and performance to help drive compliance, while meeting budget demands. The V-MAXX goggle is suited for impact, dust, mist, chemical splash and welding applications. The goggle also is over-the-glasses compatible; 3.0 and 5.0 welding shades are available. 800-343-3411 or www.bacou-dalloz.com.



Willson® V-MAXX™ safety goggle

From **H. L. Bouton** includes:

- Sixteen-ounce, double eyewash station (#01017) added to its Lavoptik line. The wall-mountable back-board delivers sterile, isotonic, double-buffered relief. 800-426-1881 or www.hlbouton.com.

- 6700 Rage, one of six safety spectacles in the Shark Hunter series. This new contemporary style features a unique spring hinge hidden in the temple, which provides added comfort and more importantly additional safety as the spectacle fits snugly to the wearer's head. 800-426-1881 or www.hlbouton.com.



H. L. Bouton double eyewash station



Safe Reflections Airex™ breathable reflective trim

¹ All lenses mentioned in Protection Update meet the ANSI Z87.1 standard for industrial eye and face protection.

From **Bullard** are new high-visibility hardhats with what the company says are the brightest, longest-lasting colors available. The hats come in yellow, orange and green and six helmet models. 800-827-0423 or www.bullard.com.

Bullard's line of high-visibility hardhats



which provides a comfortable fit and conforms to the face to help provide enhanced eye protection, according to the company. The 174X features clear, indoor/outdoor mirrored and amber lens options and the vinyl nose cushion and form-fitting design enhances comfort, the company says. 800-328-1667 or www.3M.com/occsafety.

From **ERB Industries** is a new line of Pride designer hardhats that allows wearers to express individuality and style. The new hats feature an easy-turn knob that provides

a secure and comfortable fit without removing the helmet, the company says. They come in various attractive hues and each has clear-coat finish for a polished look and shine. 800-800-6522 or www.e-ERB.com.

Pride Hardhat from ERB Industries



From **Hornell, Inc.**, are four new accessories for users of the Speedglas® 9000 auto-darkening welding helmet. The leather sweatband replaces the plastic sweatband that comes with the helmet; the head protector is made from flame- and spark-resistant material; the throat and side protector extends the helmet's protection along the sides and bottom of the neck; and the throat protector has a bib-like design to extend spark protection along the entire front of the throat and upper chest. 800-628-9218 or www.hornell.com.



Hornell helmet accessories

From **3M™ Occupational Health & Environmental Safety** is protective eyewear 174X,

From **North Safety Products** is a new emergency eye and skin flush station designed for treatment of acid and alkali burns. Utilizing a yellow backplate, the new station is easy to find in an emergency, according to the company. Single and double stations are available, and they accommodate both 16- and 32-ounce bottles. 800-430-4110 or www.northsafety.com.



North Safety's emergency eye and skin flush station

From **OccuNomix International** are items to cool the hot-weather worker, including the full-brim hardhat, the hardhat shade, and the MiraCool® "super bandana." The company says that the MiraCool bandana holds more cooling water than other bandanas, that the shades will fit all regular hardhats and, along with the sun-blocking full-brim Vulcan® hat, will help prevent heat stress. 800-466-0071 or www.occunomix.com.



Occunomix hardhat shade

For Hearing and Breathing...

From **American Allsafe®** is the Nighthawk™ hearing protection and communications system. The U.S.-made system combines hearing protection with a communications system that has dual microphones, speakers, auto shutoff after four hours, headband cushion and digital circuitry, the company says. 800-231-1332 or www.americanallsafe.com.

From **AOSafety®** is the QuickLatch™ respirator with an easy on-and-off latch. One hand is all it takes to flip up the latch on the front, and the respirator slides off the face to give the wearer a break, the company says. Flip down the latch and the QuickLatch respirator slides back into its original fitting position. 800-225-9038 or visit www.aearo.com.

From **3M™ Occupational Health & Environmental Safety** include:



AOSafety® QuickLatch™ respirator



3M™ 174X



Miller® Edge™



3M™ 7500 Series respirator

- Half-facepiece respirators, 7500 Series Ultimate Reusable. The Cool Flow™ exhalation valve makes breathing easier and helps reduce heat and moisture buildup in the facepiece and provides cool, dry comfort, according to 3M. A new design gives a softer feel and reduces tension and pressure points on the face. 800-328-1667 or www.3m.com/occsafety.
- AirMate™ SCBAG™ self-contained breathing apparatus (SCBA), which stores in a reversible carrying bag that opens to form a vest with the SCBA system in place and ready to use, the company says. The SCBAG is well suited for confined spaces and emergency use, and is NIOSH approved. 800-328-1667 or www.3m.com/occsafety.

CFR-1 respirator from North Safety



From **North Safety Products** includes:

- The CFR-1 particulate respirator, which combines a reusable facepiece with replaceable disposable filters as an alternative to disposable dust masks. Since the disposable filter does not contact the face, the filter is protected from sweat and moisture, thereby extending its life. 800-430-4110 or www.northsafety.com.
- North Respiratory Protection Catalog, covering the company's line of disposable and reusable particulate respirators, half-mask and full facepiece respirators, welding respirators and accessories, gas and vapor cartridges, airline respirators, airline hoses and couplers, self-contained breathing apparatus, emergency-escape breathing apparatus, and training and support materials. 800-430-4110 or www.northsafety.com.

Scott C100 SCBA



From **Scott Health & Safety** is the C100 industrial self-contained breathing apparatus (SCBA), which is designed for non-fire-related environments. It has a mini-regulator that provides a full range of motion and uninterrupted field of vision. A 30-minute, 2,216-psig aluminum cylinder is standard, and the face pieces are offered in small/medium and medium/large sizes. 800-247-7247 or www.scotthealthsafety.com.

SidePak™ aerosol monitor from TSI



From **TSI Incorporated** is the belt-mounted SidePak™ AM510 personal aerosol monitor. This small, light-weight laser photometer is designed for personal exposure monitoring and/or area monitoring in industrial environments, according to the company. 800-874-2811 or email answers@tsi.com.

Against Falls...

From **Daloz Fall Protection** includes:

- Miller® Edge™ fall-protection system, which provides a portable, engineered anchorage solution to protect decking crews. The system features continuous, 100 percent tie-off with overhead anchorage points for two workers, the company says. The unit moves with the workers as the leading edge moves. 800-873-5242 or www.bacou-daloz.com.
- Miller® StopFall™ climbing/positioning and fall-restraint system, which the company says meets the new stringent CSA Z259.14-01 standard, class A and B. The system features corrosion-resistant, stainless steel gaffs that bite into wood poles, whether wet or dry, conduit or ice-covered. 800-873-5242 or www.bacou-daloz.com.

From **Klein Tools** is the Klein-Lite™ construction-grade tradesman's set (Model 87150), which consists of Klein's fall-arrest



harness and a deceleration lanyard packaged together. The Klein-Lite fully adjustable harness provides improved resistance to chemicals, the company says. The lanyard features permanently attached, drop-forged steel, double-locking, snap

hooks. 800-323-3664 or www.kleintools.com.

From **Söll Americas** is the Xenon horizontal cable lifeline system, which provides "hands-free" protection using a shuttle connector that automatically bypasses intermediate supports without disconnecting from the lifeline, and slides freely along the entire length of the system for ease of use and added worker safety, the company says. A worker attaches to the Xenon system using a shock-absorbing lanyard and full-body harness. 866-BUY-SÖLL or www.bacou-daloz.com. ●





'Making the Case for Safety Equipment' Toolkit Is Ready to Work for Construction Safety Officers

Want to give your jobsite safety program a boost? ISEA's new "Making the Case for Safety Equipment Toolkit" is ready to help.

The "Making the Case" toolkit is a resource of information and ideas to help safety officers convince their bosses and workers for whom they are responsible about the value of personal protective equipment (PPE) in preventing injuries, saving lives and, importantly, reducing costs at the same time.

Here's what the kit includes:

- *Employer's Roadmap to PPE*, which explains the role of PPE in workplace safety, outlines steps an organization should take to make PPE part of its safety program, and provides an extensive resource of contact points at organizations involved with construction worker safety.
- *PPE at Work*, which gives guidance on undertaking a job site audit and equipping workers with proper PPE for 14 tasks common to the heavy construction industry, and includes a 10-page guide to select the right PPE for various hazard exposures.
- *Cost Benefits of PPE*, which uses data and anecdotal information to make the business case for PPE, and includes a powerful formula to calculate the damage a seemingly minor workplace injury will do to a company's bottom line.
- *PPE Testimonials*, giving examples of published articles on the importance of safety equipment in preventing injuries and saving lives.

● *Additional ISEA Resources*, including ISEA's new cost-benefit brochure (*Personal Protective Equipment: An Investment in Your Workers' and Company's Future*), *Protection Update* newsletter, ISEA's *Safety & Personal Protective Equipment Buyer's Guide*, and high-visibility and hearing-protection product guides.

"Although the kit was developed primarily to help PPE manufacturers and distributors make the business case for safety, construction safety officers can put many of the tools to work immediately," said ISEA President Dan Shipp. "We will maintain a toolkit registry, and will provide kit holders with regular updates and new tools as they become available. For example, the next tool will be a *Safety Officer's Pocket Guide to PPE*."

The prices of the binder toolkit (including one CD and one copy of ISEA's new PPE cost-benefit brochure) are \$59.95 for one, \$109.95 for two, and \$149.95 for three. The prices of the CD sold separately are \$19.95 for one, \$35.95 for two, and \$48.95 for three.

An order form and more information on the "Making the Case for Safety Equipment Toolkit" may be obtained on ISEA's web site — www.safetysafetyequipment.org — or by calling Joe Walker at ISEA, (703) 525-1695, or by putting "Making the Case Toolkit Order Form" into the subject line of your email to jwalker@safetysafetyequipment.org. ●

ISEA Launches New Website To Boost Construction Worker Safety



ISEA has launched a new website to help prevent injuries and save lives in heavy construction. The "Partnership for Worker Protection" site may be found by going to www.safetysafetyequipment.org and clicking on the "Partnership" logo.

The website explains ISEA's program to increase use of personal protective equipment (PPE), when needed, in the heavy construction industry, and provides online resources to help enhance construction worker safety, including:

- ISEA's new brochure, *Personal Protective Equipment: An Investment in Your Workers' and Company's Future*, that makes the business (cost-benefit) case for PPE;
- Always-current safety equipment buyers' and product guides covering the full range of equipment from ISEA members;
- All issues of *Protection Update* newsletter;
- A series of articles from trade and professional journals that validate the importance of equipping workers for safety and making sure they wear their PPE when needed; and
- Hot links to more than 30 other organizations involved with construction worker safety.

Please visit the site and provide feedback on what other types of information we should include to help enhance worker safety programs.

REBUILDING THE PENTAGON

from cover

in the outermost ring — the “E Ring” — watch the dedication ceremony from windows at the point of impact on the one-year anniversary of the attack. This meant work that normally would have taken several years from construction and refitting to occupancy would be completed in less than 10 months.

Looking after the safety of construction workers throughout the accelerated schedule has meant stress and many long days for Ms. Meyers, whose responsibilities cover two

some 350,000 hours a month.

“Of course, our ultimate goal is an accident rate of ‘zero,’” Ms. Meyers said as she toured a visitor through the construction site. “We will not truly be satisfied until we get there.” Since the Pentagon renovation began in the mid-1990s, the program has sustained two fatalities — one several years ago and one recently when a worker was struck by a steel beam on part of the renovation not related to the Phoenix Project, she noted.

What does the Pentagon renovation’s safety officer believe are the keys to the

safety of workers practicing more than 20 different, potentially hazardous crafts? When it comes to personal protective equipment (PPE), number one on her list is education-based enforcement “starting at the top and everyone looking out for each other,” she said. “Laborers need to be reminded to wear their PPE and to understand why they are being asked to pay attention to safety. If a supervisor comes out to the site and he or she is not wearing PPE, then what kind of message does that deliver to the workers?”

general contractors and up to 50 subcontractors working 18 hours a day. But the effort is paying off. There have been no fatalities on the Phoenix Project and workers there have sustained only two minor hand injuries, which occurred during the reconstruction of the building’s shell, Ms. Meyers said.

Moreover, the incident rate for the overall Pentagon renovation program (of which the Phoenix Project is part) currently is a remarkable 0.38. Essentially, that means only about one in 300 workers sustains an injury requiring medical treatment in the course of a year. An incident rate lower than one is considered to be excellent. In early July, the entire renovation (including 11 major work sites and nearly 1,000 workers) was logging

She noted that the Pentagon project has involved workers from many different ethnic groups, with some males coming from cultures where it is seen as less than manly to don PPE. She has provided information on safety and PPE in Mandarin Chinese, Korean and Spanish, as well as English.

As Pentagon renovation safety officer, Ms. Meyers oversees the safety programs of contractors to ensure they comply with U.S. Occupational Safety and Health Administration (OSHA) and U.S. Army Corps of Engineers safety regulations.

“Every contractor is required to have a worker safety plan,” she said. “These are submitted to me for approval. General contractors are responsible for their subcontract-



tors' safety plans. Each contractor and subcontractor must have someone with assigned responsibility for worker safety. A Pentagon renovation safety official (Ms. Meyers or one of the four safety specialists who work for her) must be on site at all times that work is going on."

She noted that one of the interesting challenges confronting safety officials during demolition and reconstruction was to educate contractors in dealing with environmental aspects of the project, particularly to protect workers against toxic mold. When the aircraft hit, sprinklers went off in the renovated portion of the building, drenching the area and creating an environment ripe for mold growth, she explained. Also, the Pentagon is located on damp, Potomac River-side land.

"When the Phoenix Project began, local emergency response and FEMA (Federal Emergency Management Agency) personnel provided on-site fitting and testing of respiratory protection against mold," Ms. Meyers said. "Several respirator manufacturers also worked closely with us to ensure that the construction workers' respiratory protection needs were met."

Pentagon contractors are responsible for supplying workers with proper PPE under provisions of their approved safety plans, while Ms. Meyers ensures that Pentagon renovation workers have the right PPE. New hires all receive a safety orientation that includes instruction on when and where they need to wear their hardhats, safety glasses or goggles, high-visibility vests, hearing pro-

Pentagon renovation workers practice more than 20 different, potentially hazardous crafts.



tection, gloves, respiratory and fall protection. The project also employs an array of noise, gas and light meters and air-monitoring equipment.

"We require 100 percent fall protection on this job site when a worker is six feet or more above the ground," Ms. Meyers said as she led her visitor past workmen on scaffolding. "That means either a guardrail or a tied-off harness — with no exceptions. Also, many workers have decided to wear high-visibility vests all the time so that equipment operators can see them more easily, even though they are not required to wear their vests in all situations."

Contractors at the Pentagon renovation also have a strong financial incentive to protect their workers. Renovation program managers will hold back up to five percent of a contractor's fees for poor worker safety, Ms. Meyers explained. These penalties can be applied if a contractor has too many accidents or if safety violations are spotted.

"If I see a safety violation, I will stop the worker in his or her tracks and make sure the violation is corrected before work continues," she said. "If it is a sub-contractor, I will send the worker to see his or her supervisor immediately, and will report the situation to the general contractor for follow up. On occasion, we have even asked for removal of a lax safety supervisor or worker who continually needs to be reminded about practicing good workplace safety."

The project's two general contractors — Amec Construction Co. and Hensel-Phelps Construction Co. — both sponsor programs to recognize workers for their attention to safety, with awards ranging from a lunch for workers all the way to giving away an all-terrain vehicle.

The one-year anniversary of the terrorist attack is on the near horizon as the Pentagon renovation safety officer walks among workers through the bustling construction site. The pride in the workers' eyes is evident, as it is in hers. It is pride for a job done well, a job done swiftly for their country and, most importantly of all in the wake of September 11, 2001, it is a job done safely. ●



Every Pentagon renovation contractor and subcontractor must have someone with assigned responsibility for worker safety.

ABOUT THE AUTHOR

Kristin Bacon is product manager for industrial safety products at Bullard in Cynthiana, KY. An ISEA member company, Bullard is a leading manufacturer of personal protective equipment and systems worldwide. Ms. Bacon's responsibilities include head protection, face protection, and body temperature management. She may be contacted at (859) 234-6616 or kristin_bacon@bullard.com.

Protection Update Seeks Stories About Life- and Cost-saving Programs

Protection Update is seeking story ideas from construction industry readers giving concrete (pardon the pun) examples about how their safety programs incorporating personal protective equipment have prevented injuries, saved lives and saved their companies' money. If you have a story to tell, contact Editor Joe Walker at 703-525-1695 or jwalker@safetysystem.com. If you send an email, please provide your telephone number. Protection Update will write the stories for future newsletter issues based upon your experiences.



PPE that Makes a Visible Difference

By Kristin Bacon
Bullard

"Getting noticed" on the job site has a whole new meaning these days. We're not talking about the boss' view of worker output or the admiring drive-by whistles. Getting noticed means being *highly visible* to fellow workers and oncoming traffic. This saves lives. There are more options available today than ever before to make the worker more visible as well as *recognizable* as a worker. This is key. We may recognize an orange safety barrel or construction work zone sign, but how often do we take action and slow down?

The typical safety vest may make the worker look like a safety barrel in low light conditions. However, if we can equip that worker with personal protective equipment (PPE) that makes him or her recognizable as a person, as well as highly visible, then we have a better opportunity to keep that worker safe.

In 1999, ISEA developed an American National Standard for High Visibility Apparel (ANSI/ISEA 107-1999). For the first time, there is a uniform, authoritative guide for the design, performance specifications, and use of high-visibility and reflective apparel.

In order to meet the 107-1999 standard,

garments must provide 360-degree visibility day and night to afford users a high level of conspicuity through the use of both fluorescent and retro-reflective materials. Garments that meet the 107 standard provide 24-hour visibility for the wearer and are more important than ever before as more highway projects take place at night to avoid disturbing traffic flow.

Take your hardhat to a whole new level

The current 107-1999 standard does not contain performance criteria for high-visibility headwear. However, the next revision of the standard will include headwear specifications. The impending change in the standard recognizes that headwear is a critical piece of PPE that is among the most recognizable safety equipment on any work site. High-visibility hardhats can dramatically help in making the worker more *recognizable* as a worker. Several options are available to make your protective cap a nice complement to your hi-viz work apparel.

- **Fluorescent Colors:** One option for increasing the visibility of your hardhat is to use a fluorescent shell color. A true fluorescent color is visible under a black light and will provide highly visible color impact as compared to a cap that is called hi-viz, but

not made with true fluorescents. Since there is no standard or requirement for the color of a high-visibility hardhat, using a true fluorescent is your best measure. The most common fluorescent or hi-viz color available is orange. However, with the need to have workers stand out from safety barrels and signs that are typically orange, other colors are gaining attention and demand, such as green and yellow. In choosing a color, it is important to consider the work surroundings. For instance, a green cap may not be the ideal head protection to use in a densely wooded area.

Over time, hi-viz hardhats will fade, especially in prolonged daylight exposure. Workers must carefully monitor the colors of their hardhats and replace them as soon as fading is evident to ensure continued visibility and safety. One way to prolong the life of your hi-viz hat is to avoid storing it in the rear window of a vehicle where it can be degraded by the sun's ultra-violet (UV) rays.

- **Striping:** Many caps are striped specifically for "decoration" — typically in orange, red, blue or green — with such a low CPL (candelas/lux/square meter) number or "candle power" that it should only be considered decorative. Reflective and/or fluorescent striping can improve the appearance of your cap, as well as helping enhance visibility, day or night.

The same highly reflective striping applied to garments that meet the ISEA/ANSI 107-1999 standard is available for application on hardhats. To achieve improved retro-reflectance, use striping with a high CPL number. Stripes are available in a range of colors and in a range of reflectivity levels, from reflective/fluorescent orange and yellow stripes with a CPL of 175 all the way up to highly reflective silver stripes with CPL of 500. Workers who require 360-degree reflectivity can add striping all the way around the brim of their caps, as well as on the top for those instances in which they need to be seen by workers stationed above them, or they need to be seen while bending.

Currently there is no requirement for high-visibility head protection. However, you can easily turn the typical "required" hard-

Bullard's Tips for Keeping Hardhats Comfortable All Day

- Be sure that the hardhat or cap has plenty of ventilation and adjustments for a comfortable, custom fit.



Full-brim hardhat with factory-applied reflective tape.

- To reduce glare that is common with hi-viz-colored caps, add anti-glare under-brim decals, available from manufacturers.
- For workers who do their jobs in full sun, provide a full brim hardhat for additional UV protection.
- Provide additional sun protection with attachable sunshades, tinted visors, or cotton neck shades that attach to the hardhat shell.

- Replace the brow pad regularly with a new or cleaned absorbent brow pad.

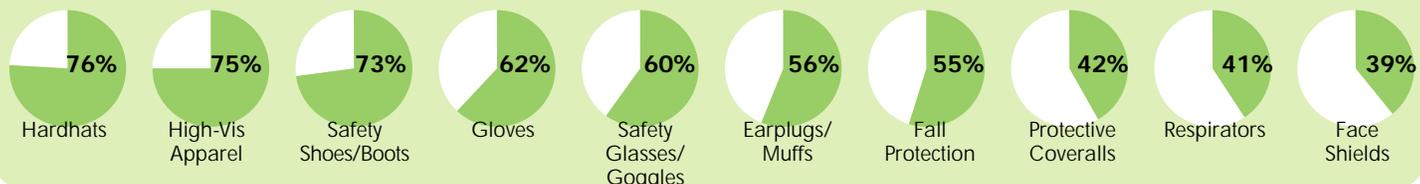
hat into a piece of PPE that also enhances the visibility. Most hardhat manufacturers will customize your cap by applying striping as well as logos to your hats. All retro-reflective striping should be applied by the hardhat manufacturer to ensure that it does not interfere with the ability of the hat to provide impact protection. Retro-reflective materials will also adhere better if applied during manufacturing because the hardhat is pre-treated during manufacturing to draw out any oils and gases that may be present in the plastic. This ensures that no "bubbling" will occur later in the life of the product.

Conclusion

PPE can only provide the protection intended if the products are being used properly and worn when required. It is especially important during the hot summer months that the employer provides hardhats and other PPE that is comfortable and cool to ensure user compliance.

Getting noticed on the job site is more important than ever. Use the ANSI/ISEA guidelines when selecting worker garments, and replace that inconspicuous hardhat with a hi-viz version that can make an impact. Check with your equipment manufacturer or distributor for information on the latest high-visibility products available. ●

Percentages of Road Construction Workers Who Regularly Use PPE When Needed*



*Road Construction Market Investigation for ISEA by Strategic Marketing Associates, Inc., Stow, OH (May 2002)

Personal Protective Equipment Use In Heavy Construction Trends Upward

Results from a new ISEA survey of safety leaders indicate that personal protective equipment (PPE) use in the heavy construction industry is on this rise, but that hundreds of thousands of workers in dangerous jobs are still unprotected.

The latest findings come one year after ISEA commissioned the first quantitative research to assess PPE use and awareness in the heavy construction industry, with the 2001 findings serving as benchmarks to assess future trends. Strategic Marketing Associates (SMA), a Stow, OH-based research firm that specializes in the construction industry, conducted both the 2001 and 2002 research by combination of faxed-back questionnaires and telephone interviews.

This year's survey covered 213 safety leaders in the private sector (construction companies, labor, insurance underwriters, trade associations, trade press) and public sector (federal, state and local officials).

Responses indicated that six of 10 PPE types investigated (hardhats, protective eye-wear, hearing protection, protective coveralls, face shields and safety shoes) showed increases in the percentages of workers who are wearing them when needed. Among the other four types, respiratory protection use was virtually unchanged, while use of safety vests, gloves and fall protection decreased.

"Hardhats, high-visibility apparel (safety vests), and safety shoes or boots continue to

be the most regularly worn PPE, with about three-quarters of workers wearing them when needed," said SMA President Jim McKeen.

"Face shields — the least regularly worn PPE of those investigated — showed a significant increase in use, moving from 34 percent in the 2001 survey to 39 percent in the follow-up. Safety shoes/boots and safety glasses/goggles also showed substantial increases — up seven percent and 13 percent, respectively. Unfortunately, the survey indicated that fall protection use declined by eight percent."

As in 2001, this year's survey asked respondents to indicate the primary reasons why construction workers do not use PPE more regularly. For the second year in a row, by far and away the main reason cited by the safety leaders is because "employers do not require or enforce use." In the 2002 survey, it was the number one reason given for six of the 10 PPE types studied, and the number two reason for the remaining types. Other factors cited frequently were "lack of style/comfort" and "hampers job performance."

Commenting on the survey findings, ISEA President Dan Shipp said: "We are encouraged by the upward trend in PPE use in the heavy construction industry. Nonetheless, with some two million Americans employed in dangerous construction jobs, the numbers indicate there still are hundreds of thousands of under-protected workers. And the 'employers don't require or enforce use' wakeup call now has sounded two years in a row.

"We will redouble our efforts as an association and through our member companies to deliver to the construction community messages that make a strong business case for workers who are equipped with and using their PPE when needed." ●

Respond to Readership Survey; Get Basic Protection Kit

If you responded to the readership survey in the spring *Protection Update*, thanks for the feedback. We trust you have received your "Basic Protection Kit" compliments of ISEA member company North Safety Products.

If you did not respond yet, we still have a few kits left. The kit includes a particulate respirator, liquid-proof gloves and safety glasses. Please complete and return the survey and we will send kits until they run out. You may access and print out the survey form on ISEA's "Partnership for Worker Protection" website. Go to www.safetyequipment.org and click on the "Partnership" logo.

MAKING CONSTRUCTION SAFER AROUND THE NATION

● The U.S. Occupational Safety and Health Administration (OSHA) has issued a **final rule that revises the criteria for recording work-related hearing loss**. Beginning Jan. 1, 2003, employers must record work-related hearing loss cases when an employee's hearing test shows a marked decrease in overall hearing. Under the new rule, the criteria will record 10-decibel shifts from the employee's initial hearing test when they also result in an overall hearing level of 25 decibels, OSHA said. The old criteria recorded 25-decibel shifts. Detailed information is available on www.osha.gov.

● Also, the National Institute for Occupational Safety and Health (NIOSH) has launched a **program to study and prevent hearing loss among construction workers** in collaboration with the United Brotherhood of Carpenters and Joiners. The comprehensive program is aimed specifically at apprentices. Contact ISEA's Dan Glucksman, dglucksman@safetysystem.com.

● The Federal Highway Administration (FHWA) is proposing an update of the *Manual of Uniform Traffic Control Devices* (MUTCD) to **require work-zone flaggers to wear safety apparel meeting the ANSI-ISEA 107-1999 Standard for High-Visibility Safety Apparel** and to be labeled for Class 3 risk exposure (Chapter 6E, Section 6E.02). The MUTCD already recommends that all workers exposed to risks of moving roadway traffic or construction equipment wear high-visibility apparel meeting the standard. FHWA is accepting comments on the proposed revisions through August 19, 2002. Contact ISEA's Dan Glucksman, dglucksman@safetysystem.com.

● A new NIOSH study indicates that **exposure to respirable silica, even at the OSHA permissible exposure limit (PEL), still could cause respiratory illnesses**. NIOSH recognizes that personal protective equipment (PPE) is needed "where engineering control methods used to control silica exposures in some industrial environments" are not feasible for reducing airborne exposures or where their implementation is hindered by the type of work being performed. The formula for the OSHA PEL for silica may

be found at 29 CFR 1910.1000—Table Z-3.

● OSHA soon will begin **collecting injury/illness data from some 13,000 construction employers**, much as the agency already does from general industry employers. This data should yield a clearer picture of injuries and illnesses in construction, and will be used to target inspections to those sites with higher-than-average rates, OSHA said.

● Also, OSHA will begin **collecting data on country of origin and primary language capability** for all workers involved in fatality and other serious accident investigations, and will for the first time collect site-specific information on construction projects where many immigrants and other workers die every year.

● OSHA and the Council on Certification of Health, Environmental and Safety Technologists (CCHST) have signed an agreement to acknowledge the **Safety Trained Supervisor in Construction (STS-Construction)** certification issued by CCHST. Possession of STS-Construction certification is an indicator that the construction site is being operated by individuals with demonstrated knowledge and ability, and of the contractor's commitment to an effective health and safety program, OSHA said.

● OSHA also has a new **"Eye and Face Protection eTool"** to help employers understand OSHA requirements pertaining to eye and face protection, and to select the right PPE for their workplaces. To find the "Eye and Face Protection eTool," visit www.osha.gov, click on the "OSHA eTools" button and then on the "eTools" page, click on "What's New."

A **new video on the safe and productive use of power nailers and staplers** is available from the International Staple, Nail and Tool Association (ISANTA). The program features interviews with contractors and delivers key messages on eye protection, understanding safety instructions, keeping one's finger off the trigger when not working, and choosing the right trigger system for specific needs. Write ISANTA, 512 W. Burlington Ave., Suite 203, La Grange, IL 60525-2245 or calling (708) 482-8138. ●

OSHA's \$100,000 Club for Construction Safety Violations

The U.S. Occupational Safety and Health Administration (OSHA) has proposed penalties of \$100,000 or more for the following recent failures to protect workers from potential hazards, including many that could be avoided or mitigated by safety equipment:

● Weathercraft Roofing, North Platt, NE, \$301,000 for failure to provide workers with adequate fall protection, contributing to two fatal accidents.

● Pate & Pate, LLC, The Woodlands, TX, \$238,000 for not protecting employees from cave-in hazards after a trenching accident took the life of a 17-year-old worker.

● Du-More Enterprises, San Antonio, \$161,000 for failure to provide cautions during tunneling operations and training for its employees; OSHA found that the company failed to have a competent person monitor for oxygen and air contaminants as a worker inside an underground pipe became unresponsive and died.

● Williams Brothers Construction Co., Inc., Houston, \$142,000 for failure to provide adequate shoring and training at an excavation site. ►12

SAFETY EQUIPMENT Works for You

Editor's Note: *Protection Update* welcomes contributions from readers for our regular Safety Equipment Works for You feature. Email your examples of where PPE has saved workers' lives or prevented injuries to Editor Joe Walker, jwalker@safetysafetyequipment.org, or mail them to the Editor, Protection Update, International Safety Equipment Association, 1901 N. Moore Street, Suite 808, Arlington, VA 22209. Photographs of workers are welcome.)

Advertise in Protection Update

Protection Update is accepting advertising for the next issue. Contact Joe Walker, editor, at jwalker@safetysafetyequipment.org for further information.



Sky Not Falling, But Ceiling Was

Darryl was wearing his protective helmet as he operated a large piece of equipment in an underground shaft. Looking up, he noticed a small crack in the roof 11 feet above. As he scaled down the machinery, a large section of overhead material broke loose and fell. Darryl was knocked to the ground. While he had cuts, scrapes and bruises, his hardhat prevented much more serious head injuries from the falling debris. Topgard® cap from Mine Safety Appliances Co., www.MSAnet.com.



Workers Arrested, Found to be Practicing Good Safety

- Ready to repair a barrel roof with a steep slope, Rogelio donned his stretchable full-body harness and tied off to a roof anchor system that included a four-point mounting assembly with a rope grab, lifeline and shock-absorbing lanyard. Rogelio stepped on a board that slipped out of place, and he lost his footing. He fell and slid off the edge of the roof, but his fall protection arrested the descent. Fellow employees grabbed his deployed lanyard and assisted Rogelio up onto the roof — uninjured. Miller® DuraFlex® full-body harness and Miller® Roof Anchor System by Dalloz Fall Protection, www.bacou-dalloz.com.

- It was windy as David tried to climb down after attaching insulating blankets to vertical Peri Concrete Forms on a bridge. As he descended from 25 feet through the gusts, David lost his footing, slipped and fell. Fortunately, he was wearing a fall-protection harness attached to a six-foot lanyard, properly tied off. The gear arrested his fall. David climbed back up the ladder, unhooked his lanyard and climbed down to safety — unhurt. Miller® Duraflex® high-visibility harness and Miller two-legged Manyard II lanyard by Dalloz Fall Protection, www.bacou-dalloz.com.

OSHA'S \$100,000 CLUB

from page 11

- B R Brick and Masonry, Houston, \$115,200 for numerous hazards at a construction site, including poor scaffolding, lack of head protection, and deficiencies with respiratory protection.
- Southern Steel, Ricks Contracting and McKnight Roofing, \$111,750 for failing to protect workers from fall hazards at a Cobb County, GA, construction site.

ISEA

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