

Protection

SPRING 2003

UPDATE

News from the International Safety Equipment Association

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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.safetysite.org.

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Respiratory Protection

How to Establish a Program

By Jeffrey S. Birkner
Moldex-Metric

Respiratory Protection is an important consideration to protect employees in the construction trades. Construction workers can be exposed to contaminants that are present in the air. These contaminants can be those we can see and those we cannot.

Establishing a comprehensive respiratory protection program that accounts for the unique aspects of your company's construction workplace(s) is central to ensure that your workers are properly equipped and wearing respiratory protection when needed. After engineering controls have removed respiratory hazards where possible, then you should ground your respiratory protection program on two fundamentals.

First, use only respirators that have been approved by the National Institute for Occupational Safety and Health (NIOSH). These products are tested and evaluated for performance, they are assigned TC numbers, and bear the NIOSH logo.

Second, follow the U.S. Occupational

Safety and Health Administration (OSHA) standard 29 CFR1910.134, which outlines the minimum elements required for an acceptable comprehensive respiratory protection program. This regulation is applicable to construction, as well as general industry, as noted in 29 CFR1926.103. It explains how the respirator should be used, the type of training that must be conducted,



PHOTO COURTESY OF MOLDEX-METRIC

the type of medical surveillance that must be done, the extent of the maintenance program, and required record keeping.

Depending on the nature of the hazard, it may be prudent to put in place a program that exceeds OSHA's minimums. In ►10

Editor's Note

Workers in heavy construction are exposed to a variety of air contaminants that may be generated by the work they are doing or the vehicular traffic that surrounds them. These contaminants may be gases, vapors, dusts, fumes, smoke or mist. Despite these hazards, only about four in 10 workers in heavy construction use respiratory protection when needed, according to ISEA-sponsored surveys in 2001 and 2002, leaving hundreds of thousands exposed to breathing hazards. While a great deal of recent attention has focused on gas masks for combat and homeland defense, this issue of *Protection Update* will help enhance understanding about why respiratory protection is every bit as important for workers in heavy construction.

NEW PROTECTION FOR ROAD CONSTRUCTORS



The EZ Drop™ respirator from AOSafety/ Aearo Co.

► Bacou-Daloz IQ docking system

FOR BREATHING...

From **AOSafety/Aearo Co.** is the EZ Drop™ half-mask cartridge respirator with a unique slide-release strap that allows the wearer to quickly remove the respirator by unhooking the neck buckle and allowing the respirator to slide down the straps to “park” on the wearer’s chest. The respirator is available in three sizes. 800-678-4163 or aearo.com.

From the **Biosystems Division of Bacou-Daloz** is the Instrument Quality (IQ) docking system that automatically calibrates and maintains up to 10 gas detectors. The IQ station connects to a central database monitored by the software component, which communicates with the docking station and creates custom templates and reports, according to the company. Biosystems.com or bacou-daloz.com.



From **Draeger Safety** is the first 2003 issue of *Dräger Review* magazine, which includes informative articles about respiratory protection during tunnel operations, the latest in the company’s portable gas detection technologies and systems, and an article about chemical protective suits. 800-615-5503 or draegerreview.com.

From **Mine Safety Appliances Co.** are:
 ● **Airhawk™** MMR air mask, which the company says incorporates the latest technologies available for industrial, agricultural, wastewater, HazMat, and HVAC work. The Airhawk SCBA is available in low-pressure (2216 psig) or high-pressure (4500 psig) versions. 800-MSA-2222 and request Bulletin 0105-102, or MSA.net.com.

● **Ultima®** XIR gas monitor, which is a micro-processor-based, infrared point gas detector for continuous monitoring of combustible gases and vapors in harsh environments. It utilizes technology that provides definitive compensation for temperature, humidity and aging effects. 800-MSA-4678 and ask for Data Sheet 07-2054 or MSAGasdetection.com.

● A “0-1,000-parts-per-million ammonia sensor” for its Ultima X series gas monitors. The sensor features 10-ppm resolution, making it ideal for use in general industrial applications, and the interchangeable sensors are easy to install and replace, according to the company. 800-MSA-4678 and ask for Data Sheet 07-2051 or MSAGasdetection.com.

From **Nextteq** is the Gastec 9500 smoke tube kit (also known as the air flow indicator kit), which the company says provides an easy way to meet qualitative fit-testing requirements. These tubes provide a simple and direct way to meet...fit test requirements per OSHA 29 CFR 1910.134, Appendix A,” the company says. 887-312-2333 or nextteq.com.



Nextteq's Gastec 9500 smoke tube kit

From **Scott Health & Safety** is the Ska-Pak® AT automatic respiratory protection solution for entering or escaping from confined space or IDLH environments.



Scott Ska-Pak® AT

The Ska-Pak AT supplied-air respirator has automatic, hands-free air-transfer capability, the company says. A flashing indicator notifies of low or lost cylinder pressure. 800-247-7257 or scotthealthsafety.com.

FOR THE WHOLE PERSON...

From **Mine Safety Appliances Co.** is the *Safety Equipment Catalog 2003-2004*, featuring the company’s latest products to protect and assist workers. The 170-page, full-color catalog covers MSA’s complete product line and training videos. 800-MSA-2222 and ask for Bulletin 555-82-MC or MSA.net.com.



Dräger Review magazine

Ultima® XIR gas monitor from MSA



▼ Sellstrom catalogs are available on CD-ROM



From **Sellstrom** are all of the company's safety catalogs on a new self-loading CD-ROM. The CD includes: *Eye, Ear, Head and Face Protection Catalog*; *Welding Protection Catalog*; *Respiratory Protection Catalog*; *Emergency Eyewash and Shower Catalog*; *General Safety Catalog*; *Fall Protection Catalog*; *Fall Protection Custom Solutions Brochure*, and *Price List*. 800-323-7402, sellstrom.com or fallprotection.com.

AGAINST FALLS...

From **DBI/SALA**, 800-328-6146 or sala-group.com are:



DBI/SALA
WrapBax™ lanyard.

- The **WrapBax™** lanyard, which is designed for tie-back use, eliminating the need for anchor straps. The new lanyard incorporates a pistol-grip design for one-handed operation even when wearing

gloves. It features a hook that exceeds the 5,000-pound strength requirements from every angle.

- The *Fall Protection and Rescue Systems* catalog. This 68-page, full-color catalog provides detailed descriptions of the company's products, and training and consulting services.

From **Elk River, Inc.**, is the **NightHawk** roofer's kit, which the company describes as both eco-

NightHawk roofer's
kit harness from
Elk River, Inc.



nomical and a complete solution to the roofer's fall-protection needs. It contains the fall protection a roofer needs in a five-gallon bucket. 800-633-3954 or elkriver.com.

From the **Miller Fall Protection Division of Bacou-Daloz** are Miller ▶

Miller Grip anchorage connectors



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MSA's Advantage® 200 LS Respirator puts you at the top of your game with the most technologically advanced respiratory protection available. Its virtually customized fit and lighter, softer facepiece exceed all previous levels of comfort, while the appealing translucent blue design helps ensure increased user acceptance. For the utmost in convenience, the Advantage 200 LS Respirator is easy to maintain – minimizing both your inventory and costs. Best of all, MSA Advantage Respirators are designed to meet NIOSH and EN standards, allowing flexibility and affordability on a global scale.

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NEW PROTECTION continued

Grip anchorage connectors, which provide portable, reusable anchor points for use in fall-protection. Also available is a temporary horizontal lifeline kit that accommodates two workers, the company says. 800-873-5242 or bacou-dalloz.com.



Silverback™ full-body harness from Protecta International

From **Protecta International**, 800-856-2442 or protecta.com, are:

- Silverback™ line of full-body harnesses, which the company says utilizes back pads and combination leg and hip pads to enhance comfort. Quick-connect, quick-release and easy adjustment make the buckles easy to manipulate, even with a gloved hand, according to the company.
- AD212AG self-retracting lifeline, which the company says has a two-pawl braking system that uses the principles of centrifugal force to arrest a fall. Fall arrest begins within two feet with energy absorber activation taking place when an impact load meets or exceeds 250 pounds.

FOR THE HEAD, FACE AND EYES!...

From **AOSafety/Aearo Co.**, 800-255-9038, are:

- Maxim™ series of safety eyewear, featuring frames that are up to 15 percent lighter than competitive eyewear, as well as elastomeric browguards and temple accents for optimum facial comfort. Aosmaxim.com.
- Virtua™ safety eyewear, which the company says blends unisex styling, impact protection and affordability into a design that weighs less than one ounce. It is available in clear, gray and indoor/outdoor lenses. Aosafety.com.



AOSafety Virtua™ safety eyewear

From the **Fendall® Division of Bacou-Dalloz** is the Pure Flow 1000® eyewash station, which the company says offers self-contained, low-main-



Fendall® Pure Flow 1000® eyewash station

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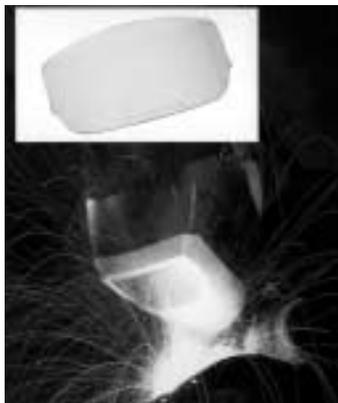


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* ALL LENSES MENTIONED IN PROTECTION UPDATE MEET THE ANSI Z87.1 STANDARD FOR INDUSTRIAL EYE PROTECTION.

tenance emergency eye care. The Pure Flow 1000 meets the ANSI Z358.1-1998 Eyewash and Shower Standard, according to the company. 800-FENDALL or bacoudalloz.com.

From **Hornell, Inc.**, are molded protection plates for its Speedglas® 9000 and utility series of auto-darkening welding lenses. These protection plates offer



Molded protection plate for Hornell Speedglas® 9000

the same impact protection as previous models, but with increased clarity through an improved manufacturing process,



Klein Tools' new line of protective eyewear

according to the company. 800-628-9218 or hornell.com.

From **Klein Tools** is a new line of protective eyewear that, the company says, has anti-fog, scratch-resistant, and anti-UV lens coatings; adjustable temple lengths, and wrap-around designs. 800-553-4676 or kleintools.com.

From **Mine Safety Appliances Co.** is the "American Flag" hardhat, with each shiny helmet being "unique" because each is covered with a slightly different flag pattern,

MSA's American Flag hardhat



according to the company. The helmets meet or exceed applicable requirements of ANSI Z89.1-1997 for a Type I helmet (Class E). 800-MSA-2222 or MSA.net.com.

FOR HANDS AND ARMS...

From **Marigold Industrial** is the *Grasp Hand Protection Report*, a full-color, 26-page booklet of useful information about hands and skin and how to protect them. Included is information about how to assess and select hand protection, the costs of neglecting hand protection, and how to find the right glove for the job. 888-566-3468 or marigoldindustrial.com. ●



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ABOUT THE AUTHOR

George Blank is respiratory protection product manager for Draeger Safety. The Pittsburgh-based company and ISEA member is a manufacturer of respiratory protection and gas detection equipment. Reach Blank at 412-787-8383 or george.blank@draeger.net.

Look for Respiratory Protection From ISEA Member Companies

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 Interspiro
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 Mine Safety Appliances Co.
 Moldex-Metric, Inc.
 North Safety Products
 Phoenix Protective Technologies Inc.
 Scott Health & Safety
 Sellstrom
 Shalon Chemical Industries
 U.S. Safety

Choosing The Right Disposable Particle Mask

By George Blank
 Draeger Safety

Respiratory protection is a broad subject that can be complicated and misunderstood by even the most experienced people.

Moreover, there are many types of particle filtering respirators. General categories include: (1) disposable particle masks, (2) half and quarter-mask respirators with a reusable filter pad, and (3) half or full facemasks with replaceable cartridges. In this article we will discuss the fundamentals of respiratory protection, particles, and the most basic and widely used form of individual worker respiratory protection — disposable particle masks, also known as filtering facemasks, which are widely used in heavy construction.

Many activities involve substances against which you need to protect yourself. Very fine aerosols or respirable dusts may be released by grinding, drilling, milling, as well as painting and cleaning. These particles can be a health hazard since they may cause respiratory tract and lung irritation, and diseases. In particular, diseases such as asbestosis and silicosis generally are known to the public. However, many other substances such as metal dusts and fumes also can cause diseases.

It is important to note that OSHA's decision logic requires the use of engineering controls as the first line of defense against respiratory hazards. Individual respirators should only be used when the hazard(s) cannot be eliminated by engineering methods.

Some fundamental information you should know about respiratory protection: In order to provide proper protection, users must

know what contaminant(s) they are being subjected to, the level of contaminant(s), and the permissible exposure limits of the contaminant(s). They also must be trained in respirator donning/doffing and such things as possible symptoms of over exposure.

Following manufactures' recommendations for donning respirators is very important because improper donning can cause a poor fit and subject the user to high levels of contaminants. Users must also be clean shaven and have been fit tested with the appropriate respirator within the last 12 months.

There are two basic fit-testing methods — qualitative (QLFT) and quantitative (QNFT). QLFT methods include smoke, Bitrex™, saccharin, and isoamyl acetate. This method can be considered a go-no-go type of test. The user must not detect any of the test media in order to pass the test. If the media are detected by taste or smell, the fit test has failed. The QNFT test method has two approved testers; the Fit Test 3000 by OHD and the Portacount by TSI. These testers provide an actual number that signifies how well the mask fits. If a test from either the QNFT or QLFT method has failed, the wearer should re-don the same mask, select a different size, or try a different brand until a successful test has been achieved.

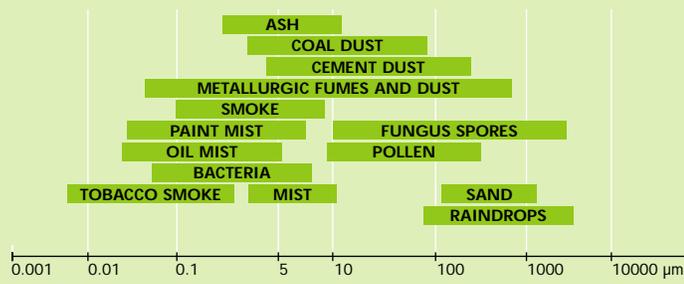
Particles are the smallest solid and/or liquid parts that may result from mechanical processes such as grinding, crushing and milling, and also from thermal processes such as combustion, reactions and heating metal. Merely mixing and sweeping of substances, or demolition and renovation work can spread particles in the air.

Particles with a size of less than 5 microns are referred to as respirable substances or fine dusts. Table 1 shows different substances with their average size distribution demonstrating where contaminants occur. Fine dusts are invisible and may penetrate the respiratory tract as far down as the alveoli.

Filtering half masks must in general not be used for protection against radioactive substances, micro-organisms and biochemically active substances.

All varieties of particle filtering respirators are manufactured to fit into one of the nine

Table 1



categories of particle filtering media.

Three categories of the filter media that concern oil-based aerosols are: N – Not oil resistant, R – Oil Resistant, and P- Oil Proof; three levels of filtering efficiency are 95%, 97%, and 99.97% (100). The P100 provides the greatest level of protection and the N95 provides the lowest level. See Table 2.

Filtering facemasks are available in shapes that include preformed three dimensional, accordion flat fold, fold in half and combinations of these designs. Folded masks that are individually packaged can be kept clean when taken to the workplace in pockets or work supply containers. When at the workplace, a clean mask can be donned quickly.

A layered filter material should provide longer service life than a single ply material.

The filter material should keep breathing resistances at an extremely low level; to minimize the heat generated within the mask. Furthermore, many masks are equipped with an exhalation valve, which even further reduces breathing resistance and heat build up. Heat buildup and breathing resistance represent two of workers' principal objections to wearing filtering face masks.

Features affecting user acceptance and mask quality include:

- Cloth-faced elastic or rubber straps.
- Number of attachment points of the straps, 2 or 4.
- Straps that are the proper length and strength to obtain a proper fit.
- Ease of donning and doffing.
- Adjustable nose bridge seal clip.
- Exhalation valve.
- Breathing resistance.
- Durability.
- Interface with additional protective accessories such as goggles, ear protection or a

safety helmet without a problem.

The respirator must not only meet safety requirements, but also should be user friendly, comfortable, and easy to use. ●

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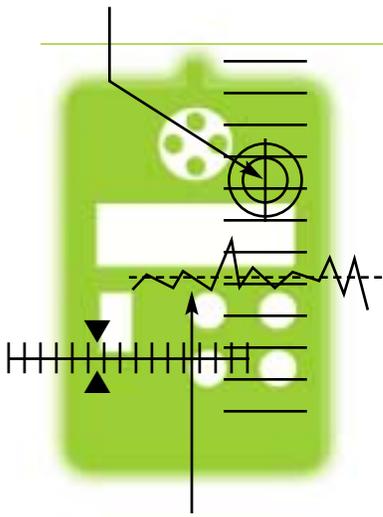
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Table 2

	95%	97%	99.97%
N	N95	N97	N100
R	R95	R97	R100
P	P95	P97	P100



How to Ensure Gas Detection Sensor Accuracy

A sensor verification test for gas-detection instruments must be conducted according to gas detector manufacturers' requirements to ensure sensors are working properly to save lives when the need arises, according to ISEA.

"User safety is obviously the primary concern of portable instrument users," said Gretchen Manning, chair of ISEA's Instruments Group, and Portable Instruments Product Group manager for Mine Safety Appliances Co. (MSA). "But reports coming to our attention indicate that many users are confused by calibration requirements and, therefore, may not take the time to perform a simple sensor verification test before each use."

Calibration drift is normal and happens to most gas-detection instruments over time, Manning noted. If unchecked, it can lead to inaccurate readings and subsequent failure

to alarm at hazardous levels, risking users' health and safety.

There are two ways to verify instrument calibration accuracy: (1) through a functional or "bump" test, or (2) a full calibration.

"A 'bump' test exposes the instrument to a known concentration of a test gas," Manning said. "The instrument reading is compared to the actual quantity of gas present, as indicated on the cylinder. If the instrument's response is within an acceptable range of the actual concentration, then its calibration is verified. If the bump test results are not within the acceptable range, then a full calibration must be performed."

ISEA's new "Statement on Verification of Calibration for Direct Reading Portable Gas Monitors Used in Confined Spaces" may be found on safetyequipment.org. ●

Heavy equipment passes the ISEA Safety Station at World of Concrete 2003.



ISEA 'Safety Station' Protects 10,000 at World of Concrete

Some 10,000 visitors to World of Concrete (WOC) 2003 in Las Vegas returned to their jobs better protected against hazards by personal protective equipment (PPE) distributed at the "ISEA Safety Station."

Four leading PPE manufacturers and ISEA members — Aearo Company, Bacou-Dalloz, Mine Safety Appliances Co. and North Safety Products — gave out 10,000 pairs of complimentary safety glasses and earplugs, and 5,000 respirators at the "Safety Station," which was located in the show's outdoor demo area. With more than 73,000 registrants, the 2003 show rivaled the all-time record of 77,000 set in 2001. ▶



ISEA's Safety Station was a busy place.



"By donating PPE to prevent construction-related injuries and illness, our members underscored their commitment to our industry's ultimate mission — worker protection," said ISEA President Dan Shipp. "If this gesture at

Protection" information — including *Protection Update* subscriptions — to enhance their overall worker safety programs. ●

WOC saves one eye, or prevents one loss of hearing or instance of lung damage, then our 'Safety Station' goal has been achieved."

In addition to safety glasses, earplugs and respirators, visitors to the "Safety Station" collected "Partnership for Worker

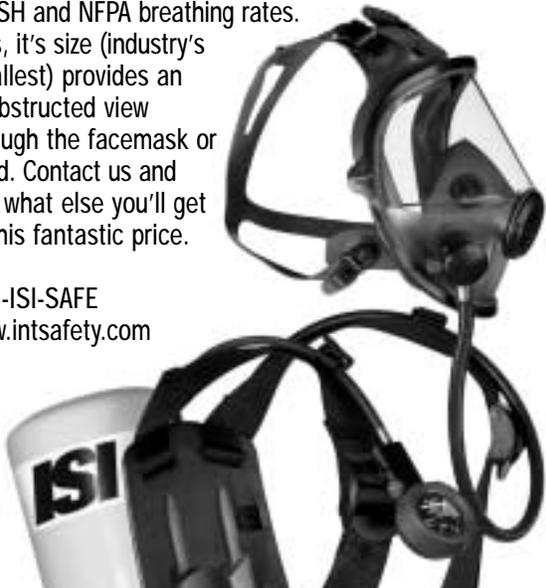
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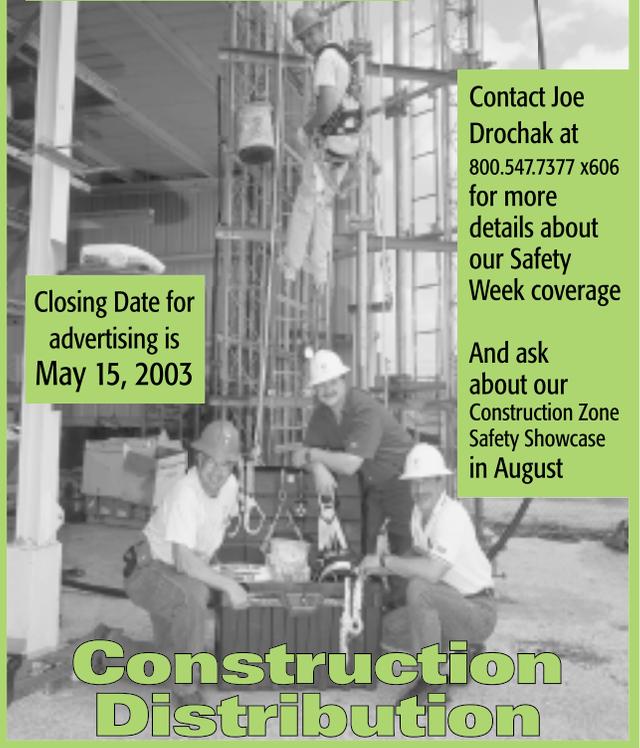
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RESPIRATORY PROTECTION PROGRAM

from cover

those cases, the manufacturer of the respirator(s) you choose can provide assistance and recommend other sources of information. In addition, you may wish to consider obtaining help from an industrial hygienist or other health and safety professionals.

After becoming familiar with OSHA's regulation and knowing that you should only use NIOSH-approved equipment, begin the development of your unique respiratory protection program by understanding the nature of the hazard(s) from which the employee is to be protected. Is it a gas, vapor, dust, fume, smoke, mist, etc? What are the concentrations? What are the health effects? Are the effects of the substance only through the respiratory system or can they be absorbed through the skin or other tis-

sues such as the eyes? Is the substance at a concentration that makes it immediately dangerous to life or health (IDLH)?

First, the respiratory protection program must be in a written program or Standard Operating Procedure (SOP). It must act as a roadmap in providing the directions to successfully run the program. The detail required for the program is mainly driven by the toxicity of the hazard from which the employee is being protected and site-specific concerns such as the actual operation that is creating the hazard, the temperature, humidity, the employee's work rate, and various other factors. Additionally, the employer must consider how to handle emergency situations. A suitably trained individual must administer the program. As a minimum, the program

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Rule Will Address Number of Times a Respirator May Be Used

In 2003, OSHA is expected to release a proposed rule that will be added to respiratory protection regulation 29CFR1910.134. This will be an assigned protection factor (APF) table.

APFs are the minimum expected workplace level of respiratory protection that would be provided by a properly functioning and used respirator or a class of respirator to properly fitted and trained users.

Simply stated, this number tells the user how many times above the Permissible Exposure Limit the respirator may be used. Half-mask respirators, including disposable filtering facepieces, are assigned a 10, full facepiece respirators a 50, and so on.

The rulemaking process allows for public comments and hearings; the public is encouraged to comment.

must include all the following elements:

- Procedures for selecting respirators for use in the workplace — Outlines how selection of respirators should be made and some of the items that must be considered as part of the selection process.
- Medical Evaluation — Details minimal requirements to perform medical evaluations and how they should be done, and by whom.
- Fit Testing — Outlines the fit testing requirements for use of respirators. Delineates the use of qualitative and/or quantitative fit test procedures. Fit testing must be performed annually.
- Use of Respirators — Details the responsibilities of the employer.
- Maintenance and Care of Respirator — Outlines that the employer must provide for cleaning and disinfecting, storage, inspection, and repair of respirators used by employees.
- Breathing Air Quality and Use — Outlines the breathing air requirement for supplied-air and SCBA respirators (not all programs will use this level of respiratory protection).
- Identification of Filters, Cartridges and Canisters — Simply states that all filters, cartridges and canisters must be properly color coded with the NIOSH approval label,

and that the label may not be removed and must remain legible.

- Training and Information — Outlines the training items that must be covered in training and re-training employees in the use of respiratory protection; re-training must ▶

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Note: This article is based in large measure on an article published in the January 2003 issue of *Plant Safety & Maintenance* magazine, and was reprinted with the permission of that magazine.

RESPIRATORY PROTECTION

from page 11

be performed annually.

- Program Evaluation — Outlines how the effectiveness of a respiratory protection pro-



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Silica Hazard Cards Available from OSHA

New health hazard information on crystalline silica is available from OSHA on cards to help workers and employers understand more about how they can protect themselves against exposure. Pocket-size cards in English and Spanish provide a quick reference and recommendations, they identify symptoms of silicosis and the most common causes of occupational exposure, and include recommendations for appropriate use of respirators and other personal protective equipment. Visit the Publications/Posters page of osha.gov.

gram should be measured; it gives items that should be examined, including fit, exposures, employee use, and maintenance.

- Record Keeping — Outlines what written records the employer must keep.

Naturally, each program must be developed based on employee needs and required level of respiratory protection. Once the hazard has been identified, the employer can think about the selection of a respirator. This process really needs to occur prior to a program being written. Logically, you need to know the level of protection prior to writing your program.

Often, the MSDS will indicate what level of protection is needed and should be used as a guide. For example, if we are talking about a relatively low toxicity chemical in dust form and the exposure levels are low, a disposable filtering facepiece may be adequate and will not require an extremely in-depth respiratory protection program. If, on the other hand, we are talking about a highly toxic chemical vapor with excessive concentrations in the work place, a supplied air respirator may be advised. This level of respiratory protection requires a much more detailed respiratory protection program.

Construction trades are somewhat unique because the worksite, as well as personnel,

may be mobile. This situation presents some difficulties in the implementation of a respirator program. It is important to consider these nuances in developing a respirator program.

Obviously, it may be necessary to obtain the assistance of a health and safety professional in setting up a program. Do not be afraid to ask questions and get assistance. Local OSHA consultation offices can be very helpful in providing guidance in these and many other health and safety matters. ●

ABOUT THE AUTHOR

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Tell Us Your Story

Protection Update seeks stories from construction industry safety specialists 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@safetyspecialists.org. If you send an email, please provide your telephone number. *Protection Update* will write the stories for future newsletter issues based upon your experiences.

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MAKING CONSTRUCTION SAFER AROUND THE NATION

Employers who expose their workers to serious safety and health hazards and who continue to defy worker safety and health regulations will be subject to an **enhanced enforcement policy** under the U.S. Occupational Safety and Health Administration (OSHA). A PBS Frontline/*New York Times* series in January concerning safety conditions at a company's pipe foundry operations apparently prompted OSHA to develop the new policy. It focuses on employers that have received violations considered to be at the highest level of severity, OSHA said. The policy strengthens five specific areas: (1) follow-up inspections, (2) programmed inspections, (3) public

awareness, (4) settlements, and (5) federal court enforcement. Visit osha.gov.

American Society of Safety Engineers (ASSE) welcomed the OSHA announcement. "The unacceptable problem of these 'bad actor' employers like those documented in the PBS Frontline/*New York Times* series...is long standing. It is an encouraging development that...OSHA will be taking these steps to force a relatively small number of employers, who flagrantly disregard occupational safety and health laws, to understand and carry out their responsibilities," said ASSE President Mark Hansen.

"**Work Zone Flagger Training** is an affordable way to protect your crew and

OSHA's \$100,000 Club for Construction-related 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:

- Oakwood Homes Corp., Greensboro, N.C., \$182,500 for failure to protect employees with adequate fall protection at a Killeen, Texas, worksite. The company was cited for two alleged willful and numerous serious and other violations. OSHA investigated after a worker was injured.
- Campo Sheet Metal Works Inc., Houston, \$175,000 for failure to implement procedures to prevent the accidental startup of a machine that contributed to the death of a 17-year-old worker. The citation involved four alleged willful and two serious violations, including one for failing to require the use of personal protection equipment.
- Plum Creek wood products plant, Columbia Falls, Mont., \$169,000 for failure to protect employees working on a conveyor system; OSHA issued one willful, eight serious, two repeat, and one failure-to-correct citation after an accident took the life of a worker.
- H.C. Price Co., Dallas, \$150,000 for failure to protect workers excavating a pipeline near overhead power lines in Genoa, Ill. OSHA investigated based on information that a worker was paralyzed after contacting a power line. Violations included operating a crane and excavator too close to power lines, and issues involving fall protection and training.
- Johnson Bros. Corp., Litchfield, Minn., \$126,000 for failing to protect workers from trenching and excavation hazards at a Venice, Fla., job site. The company was cited for two willful violations of trenching standards.
- Brett-Robinson and three subcontractors, \$126,000 for failing to protect workers from fall hazards at a 10-story building under construction in Gulf Shores, Ala. The three subcontractors cited were United Forming, Inc., Baroco Electric Construction Co., and Kittrell Acoustics, which also was cited for failing to provide eye protection for an employee using a nail gun. ●

those driving by them," says National Safety Council (NSC). The four-hour course meets guidelines in the *Manual of Uniform Traffic Control Devices* and the ANSI standard ISEA-107-1999. Flagger students get a laminated, pocket-sized *Participant Guide* that provides quick reference. NSC Training Centers offer the training in most states. Call 800-621-7619 or visit nsc.org/osh/flagsaft.htm.

New websites to enhance construction worker safety have been launched by *Contractor Tools & Supplies* magazine (contractortoolsandsupplies.com), which has a strong emphasis on safety, and the Chicagoland Construction Safety Council (buildsafe.org). The CT&S site is designed to help contractors find their way "through the maze of cyber information," writes Editor Clair David Urbain. Within the "Buildsafe" site, visitors will find useful links, resources and information geared to the construction safety and health industry; contact webmaster Jack Kozina, 708-544-2082, with suggestions.

OSHA plans to move forward with a negotiated rulemaking to update its **construction safety standard for cranes and derricks**. The proposed list of Crane and Derrick Negotiated Rulemaking Advisory Committee members appears on OSHA's website under *Federal Register Notices*. Visit osha.gov.

Concrete Sawing and Drilling Association has published a **new CSDA Safety Manual**. It features a Field Safety Manual section with a sample policy statement, safety program responsibilities and sections on electrical safety, vehicle safety policies, accident reporting, roadway safety policies and employee safety orientation, according to *Concrete Openings* magazine. 727-577-5004 or csda.org.

OSHA reports that **more than \$2.2 million in new funding is earmarked** in the President's Fiscal Year 2004 budget **for outreach to Spanish and other non-English-speaking workers**; this is the first time that OSHA's budget will include additional funding for multilingual outreach.

National Work Zone Awareness Week was observed April 6-12 to emphasize the growing number of fatalities and

injuries that occur each year in roadway work zones. In 2001, the latest year for which statistics are available, more than 1,000 people lost their lives in work zones. ●

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Works for You

Editor's Note: *Protection Update* welcomes contributions from readers for our regular Safety Equipment Works for You feature. Email 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. Photos are welcome.



He Lives to Fight Another Day

Robert, a fire captain in Columbia, S.C., was wearing respiratory protection as he climbed the stairs in a burning two-story apartment. Suddenly the roof collapsed; Robert was knocked down, pinned briefly on the floor, and exposed to dense smoke and heat estimated at 2,500 degrees F. His clothing and equipment were ablaze as Robert extricated himself from the fallen debris and escaped. But his mask stayed in place, providing the fresh air that enabled him to live to fight another fire. Respiratory protection by Mine Safety Appliances Co., MSAnet.com.



Smoke Wasn't In His Eyes

In March 2000, Dennis escaped through thick smoke from a fire on the 18th floor of a Chicago apartment building. When the building's fire alarm sounded again in 2002, Dennis was prepared with a respiratory protection escape hood. "Having the mask knocked down the panic I was feeling so I could think of my plans and how to get out," said Dennis, who already had plotted an escape route. Wearing the hood, he then helped a neighbor to safety. Parat C smoke escape hood by Draeger Safety, draeger.net.



Hardhat "Saves His Neck"

Eric, a ventilation installation supervisor, fell about three meters onto the steel deck of an offshore accommodation platform in the Gulf of Mexico. Although he suffered some fairly serious injuries — fractured sternum, neck injury, and stitches to the back of the head — he credited his hardhat for staying in position during the fall and "saving his neck," even though the helmet was not meant to provide fall protection for the head. Hardhat by Mine Safety Appliances Co. ●

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