BAY AREA ENVIRONMENTAL SAFETY GROUP

Safety Insider

MAY 2008

MEETING TIME AND LOCATION

Wednesday

June 18, 2008

11:30 am— 1:00 pm

Arthur's Restaurant

2875 Lakeview Dr.
Santa Clara.

For Directions, go to www.baesg.org

RSVP at

BAESGresv @comcast.net

INSIDE THIS ISSUE:

June Meeting Announcement

Navigating the World of Tanks, Tips for Owners and Operators of USTs and ASTs

Presented by

Ms. Paula Stewart

California State Registered Environmental Health Specialist

Bay Area Environmental Solutions and Training

Mark you Calendars for the 2008 BAESG Professional Development Conference

This year marks our Sixth Annual Professional Development Conference. Speakers will present on various topics related to Sustainability and Environmental Regulatory Updates. Plan to spend all day with us at Mission College on October 15th. Seminar fee includes Continental Breakfast and Lunch, prepared by the Mission College Culinary Department.

Study Shows Why Cell Phones and Driving Don't Mix

From the Environmental Resource Center, June 2, 2008

The notion that talking on a cell phone while driving a car isn't safe seems obvious, yet what happens in the brain while it juggles the two tasks is not.

A study by a University of South Carolina psychology researcher featured in the journal, Experimental Psychology, provides a better understanding of why language—talking and listening, including on a cell phone—interferes with visual tasks, such as driving.

In two different experiments, associate professor of psychology Dr. Amit Almor found that planning to speak and speaking put far more demands on the brain's resources than listening.

"We measured their attention level and found that subjects were four times more distracted while preparing to speak or speaking than when they were listening," said Almor of the 47 people who participated in the experiment. "People can tune in or out as needed when listening."

One experiment required participants to detect visual shapes on a monitor, and a second experiment required participants to use a computer mouse to track a fast-moving target on the screen. In both experiments, participants performed the visual task while listening to prerecorded narratives and responding to the narratives.

Almor calls the finding "very strong" and expects it to be even stronger in actual, interactive conversation. He and Tim Boiteau, a graduate student in linguistics, have repeated the experiment using 20 pairs of friends who engaged in real conversation while completing visual tasks. Those results are being compiled this summer.

"I anticipate the effect to be even stronger and more dynamic because, in conversation, people have the urge to contribute," said Almor. "In conversation, we compete with the other person. I suspect that the greater the urge to speak, the greater the distraction from the visual task."

In both experiments, Almor placed the participants in a circular, surround-sound environment in which the speakers were hidden and the voice shifted from the front, rear, or either side.

Almor found that participants could complete the visual task in front of them more easily when the projected voice also was in front. This effect, while not so strong as the difference between preparing to speak or speaking and listening, suggests that simultaneously performing a language task and a visual task is easier when the tasks are in the same space physically and cognitively.

"Either people are used to face-to-face communication or, when they engage in a language task, they create a mental representation in their mind and place the voice somewhere in space," Almor said. "In this case, that space is in front of them, which suggests that it may be easier to have all things that require attention occupy the same space."

The finding may be useful in the development of new technologies, said Almor. In the case of a car, an internal speaker phone could project a speaker's voice from the front so that it occupies the same place as the visual task of driving. The same could be applied in remote classroom instruction, in PowerPoint presentations, and in military and pilot training.

Almor's findings are particularly relevant in light of recent statistics. The National Highway Traffic and Safety Administration (NHTSA) reported in April that 25% of all car accidents are caused by distractions. A survey done by Nationwide Mutual Insurance in 2007 indicated that 73% of drivers talk on cell phones while driving. Given that cell-phone sales have vaulted to 254 million in February 2008 up from 4.3 million in 1990, according to the Cellular Telecommunications & Internet Association, there is good reason for researchers to study the brain and how talking and listening on a cell phone interferes with driving a car.

At the University of South Carolina, Almor conducts research on language and memory (the brain's ability to acquire, organize, revise, and store information).

To read the original study, go to http://www.psycontent.com/content/1618-3169 **and click on Issue Number 4,**

Regulatory Update: After July 1, 2008, Cell Phones may no longer be used in California while Driving unless using a hands free device!

Drivers cited will be subject to a fine of $20 (at least $70 with fees and penalties) for a first offense and $50 (at least $175 with fees and penalties) for subsequent offenses. Push to talk (PTT) systems, such as those from Nextel, will be exempt from the hands-free edict until July 1, 2011.

Teen drivers are faced with an even more restrictive mobile phone law. Effective July 1, 2008, drivers under the age of 18 are prohibited from using any mobile messaging device (including wireless phones, pagers, texting devices, laptops, etc.) - even if it is equipped with a hands-free device. Drivers cited will be subject to a fine of $20 (at least $70 with fees and penalties) for a first offense and $50 (at least $175 with fees and penalties) for subsequent offenses.

Regulatory Update: Smoking and Driving with Minors in the car / School Zone Speed Limits

NO SMOKING! (California Vehicle Code Section 12814.6) This statute is intended to protect children riding in vehicles from the dangers second-hand smoke. Effective January 1, 2008, the law makes it an infraction - punishable by a fine of up to $100 - to smoke a cigar, cigarette, or pipe in a vehicle containing a minor, whether the vehicle is in motion or not.

SLOW FOR SCHOOLS! (California Vehicle Code Section 22358.4) This amendment to the vehicle code allows local jurisdictions to establish a speed zone of 15 mph up to 500 feet around schools, if a local ordinance is adopted to authorize it. (This is a decrease from the prima facie speed limit of 25 mph in school zones).

OSHA Spring 2008 Agenda Published in Federal Register

From Occupational Hazards EHS Today, May 8, 2008, By Katherine Torres

OSHA's most recently published semiannual regulatory agenda listed 7 hazard topics on the Federal Register, many of which have garnered much public interest in recent years. In December 2007, OSHA spokesperson Sharon Worthy told OccupationalHazards.com that the Federal Register will post "only the most significant items" online.

Methylene chloride and occupational exposure to crystalline silica, beryllium and diacetyl continue to be in pre-rule stage, according to the agenda. In the Fall 2007 agenda, OSHA said it would complete a complete peer review of crystalline silica's health effects and risk assessment by January 2008. The current agenda indicates that this review has been pushed back to August 2008.

OSHA did make progress with the beryllium rule by completing a Small Business Regulatory Enforcement and Fairness Act (SBREFA) report in January 2008. A complete peer review of health effects and risk assessment for this hazard is slated for November 2008. Methylene Chloride, under a section 610 review considering the continued need for the rule or if it overlaps, duplicates or conflicts with other federal or state regulations, will be given an end review in November 2008.

Occupational exposure to diacetyl, as well as food flavorings that contain the agent, appeared on the agenda for the first time in Fall 2007. The agency held a stakeholder meeting in October 2007 and will initiate a SBREFA panel in May 2008 regarding this hazard.

Confined space in construction currently is in the proposed rule stage, and OSHA noted there will be September 2008 public hearing on the final rule. This standard was initiated after the United Steel Workers of America petitioned OSHA for a rule to extend confined-space protection to construction workers because the 1993 standard did not apply to this specific industry.

Cranes and derricks also are in the agenda's proposed rule stage, with a notice of proposed rulemaking planned for August 2008.

Finally, OSHA noted that after a March 2006 public hearing for the Electric Power Transmission and Distribution - Electrical Protective Equipment rule, it is reopening the record in June to gather additional information on minimum approach distances.

For information on other items on the agenda not listed on the Federal Register, go to **http://www.reginfo.gov or www.regulations.gov.**

Evidence of hazardous chemicals and materials found in games consoles

Source: Greenpeace International (Published May 21, 2008, Environmental-Expert eNewsletter)

The Greenpeace scientific report "Playing Dirty", released this week, reveals that the world's most popular game consoles, Nintendo Wii, Sony PlayStation 3 Elite (PS3) and Microsoft Xbox 360, tested positive for hazardous chemicals and materials such as polyvinyl chloride (PVC), phthalates, beryllium and bromine indicative of brominated flame retardants (BFRs). With some differences in the amount of hazardous chemicals and materials, all three manufacturers failed the green electronics test set by Greenpeace .

The report reveals, for both the Xbox 360 and PS3, some materials contained very high levels of phthalates that are not permitted in components of toys or childcare articles sold in the EU.

One of the phthalates, DEHP, is known to interfere with sexual development in mammals – including humans - especially in males. The other phthalate, DiNP, found only in Xbox 360, is prohibited from use in toys and childcare articles if children can place them in their mouth (2).

"Whether game consoles are classified as toys or not, they can still contain hazardous chemicals and materials that could harm humans. The technology is available for the manufacturers to design out toxics and produce greener game consoles now," said Dr. Kevin Brigden, Greenpeace Science Unit.

All game consoles tested positive for various hazardous chemicals; for example, high levels of bromine were found in the components of all three, with the highest by weight levels of 13.8% and 12.5% in the PS3 and the Wii respectively. But the tests also show that each of the manufacturers has avoided or reduced uses of individual hazardous substances in certain materials within their consoles. In the Nintendo Wii, beryllium alloys were not identified in electrical contacts, and the use of PVC and phthalates was found to be limited. At the same time, the PS3 included examples of "bromine - free" circuit boards, and the Xbox 360 had lower usage of brominated materials within housing materials.

"Our test clearly shows that a greener game console is possible; manufacturers just need to look "inside the box" of the competition to see which of their own dirty components can be replaced with toxic free materials." said Casey Harrell, Greenpeace International Toxics Campaigner.

The game consoles market is one of the fastest growing in consumer electronics with over 60 million sold and 14 percent growth last year (3). They not only contain hazardous chemicals but also contribute to the fastest growing type of waste – ewaste. Discarded game consoles are often dumped and end up in unsafe and dirty recycling yards in developing countries, harming the environment and the health of workers.

Fighting the Superbug- MRSA is in the workplace, and it's not going away. Protect your workers now from this emerging threat

Occupational Health & Safety E-News 05-14-2008, by Gary Burris

It was bound to happen. Medical professionals warned about it more than 50 years ago when a surprisingly effective tool for fighting infections first entered into broad use in the 1950s. If we step back a bit more to 1939, when two European scientists used penicillin for the first time on a human patient, it becomes obvious why antibiotics have been so heavily prescribed to fight infections. That early success was the fuse that has ignited one of the biggest health challenges of our lifetime: MRSA (methicillin resistant staphylococcus aureus). It's already making great strides into the general public and the workplace. Worker's compensation claims are on the rise because of the severe and sometimes life-threatening infections that are associated with MRSA.

Five predominant events have led to the emergence of the superbug MRSA. First, bacteria know how to mutate, and they do it with fierce abandon. Next, antibiotics of all types, including penicillin and its successors,

have been over-prescribed for decades. Third, people who have been prescribed antibiotics have tended to stop taking their prescriptions when symptoms subside, even though it has always been recommended that a person finishes the prescription in whole unless side effects occur. Fourth, anti-bacterial soaps have proliferated since their introduction in the 1990s. Like the antibiotics used in medicine, the overuse of antibacterial soaps and similar products, especially in healthy homes and work sites, can help bacteria grow resistant. Last, the overall trend in our society to skip showers after strenuous exercise or physical activity, and instead apply a sweet-smelling body spray, has created a breeding ground for aggressive bacteria such as MRSA. If they aren't eliminated completely, the bacteria morph and mutate to come back stronger and more deadly than before. Sometimes there are other courses of action that don't include antibiotics and can fight off minor infections. In those cases, prescribing antibiotics can be superfluous and detrimental in the long term.

Squeaky Clean is Good Enough

In the 1990s, we saw the introduction, and consequent flood, of antibacterial soaps and miscellaneous products. It seemed like every day there was a new antibacterial product on the market. The antibacterial movement reached its peak when antibacterial clothing and fabrics were introduced.

Antibacterial products aren't bad in concept. What is bad is when these products are introduced into perfectly healthy environments. Antibacterial soaps can kill off good bacteria, too, so the use of them may do more harm than good in the bigger picture.

Don't Call Me, I'll Call You

One of most amazing social evolutions in American life is the trend toward not showering. Everyone knows a person, or likely several, who thinks nothing of working out for an hour or two and then throws on his street clothes to head home or go on a date. The astounding growth in the men's body spray market is an immediate indication that guys aren't showering like they used to.

Dirty, moist, salty, warm skin is a perfect breeding ground for MRSA. Bacteria thrive on skin and grow rapidly in the right conditions. Showering is a vital part of curbing the MRSA epidemic. The CDC touts washing hands as a main defense for preventing MRSA, but washing hands only isn't going to kill or remove the bacteria that might be present on a person's legs or arms. Because the easiest way for MRSA to enter the body is via a cut or break in the skin, it's crucial to get MRSA off the entire body—not just the hands.

Steps for Prevention

Now that we've established the problem, let's look at ways to help workers protect themselves from MRSA. A simple MRSA prevention plan can help your workers stay infection free.

• Wash hands regularly and shower after physical activity. Bacteria, including MRSA, live on the skin. Washing hands and showering (an antibacterial soap is not necessary) removes bacteria from the body, greatly reducing a worker's chance of contracting an infection. Showers are extremely important after physical activity.

• Treat and cover wounds. Breaks in the skin are the number one way MRSA enters the body. When treating minor wounds, look for an over-the counter wound-care treatment that kills MRSA. Ask your first aid supplier for a recommendation. Be sure to cover all wounds.

• Don’t share personal items. Razors are especially troublesome in relation to spreading MRSA. It is possible for razors to break the skin and create opportunities for MRSA and other bacteria to enter the body. Bacteria can live on razors, as well as towels, benches, clothing, and similar items. It can be helpful to dry towels and clothing items in a dryer instead of hanging them up to dry. A warm to hot dryer helps to kill bacteria.
• Wipe down gym equipment after use. Some companies offer gym equipment or a fitness center for workers. Be sure to wipe down gym equipment with an appropriate cleaner.

- Properly clean tools, gear, and work equipment. Take time during the work day to clean the tools and equipment that can accumulate bacteria. Situations where workers share tools and gear may be ripe for the spread of infection-causing bacteria.
-

MRSA is here to stay, so it’s time to put a plan into action to protect your workers. Education and preparation will help keep your work environment infection free.

Get Personalized Recycling Posters for Your Office in Seconds: Free Tool

Remind your employees about the importance of recycling in the workplace with personalized posters! This free tool creates paper recycling posters for you in seconds. All it takes is three steps:

1. Enter your company name
2. Select materials you want recycled
3. Choose one of two poster sizes

Go To: http://www.paperrecycles.org/workplace_recycling/dynamicposter/index.html

Experts Weigh Options for Health Surveillance in Nanotech Workers

American College of Occupational and Environmental Medicine Press Release, May 15, 2008

Elk Grove Village, IL, May 15, 2008 – Does exposure to nanoparticles pose a health threat to workers? Pending further research to clarify the risks, nanotechnology companies need to consider what steps they will take to protect the health of employees exposed to engineered nanoparticles, according to a study in the May Journal of Occupational and Environmental Medicine, official publication of the American College of Occupational and Environmental Medicine (ACOEM).

In the absence of information on specific health effects, "It is difficult to identify an appropriate evidence-based occupational health surveillance strategy for workers handling nanomaterials," according to lead author Paul A. Schulte, Ph.D., of the National Institute for Occupational Safety and Health and colleagues.

As the number of workers exposed to nanoparticles continues to increase, there is "growing, but not definitive" evidence of potential health hazards. However, these data come mainly from experimental studies in animals; there have been no published studies of health effects in groups of workers exposed to nanoparticles. Dr. Schulte and colleagues write, "Companies currently involved with nanotechnology are faced with

the dilemma of balancing a desire to expand a potentially bountiful technology with limited knowledge about the potential hazards."

Given the lack of data, the authors suggest a range of possible health surveillance approaches. Depending on the circumstances, no targeted action beyond basic medical and hazard surveillance may be needed. In some settings, it may be appropriate to document the characteristics and handling of nanoparticles and to identify potentially exposed workers. Recording this information in a database would provide a basis for action in case new health hazards came to light.

The next step would be to establish some form of medical monitoring, including either general health monitoring or some form of targeted medical testing – for example, focusing on changes in lung function. However, in the absence of data on potential health effects, the value of medical monitoring is questionable as the occupational medicine physicians performing the examinations would not know if a specific abnormality is linked to exposure to nanoparticles.

The authors highlight the need for more research to guide health surveillance approaches in the nanotechnology industry. Basic science studies may be able to identify certain types of nanoparticles with higher or lower toxic potential, while follow-up studies of exposed workers might help to identify emerging health conditions.

Meanwhile, establishing some type of exposure and employee tracking registry might be of value, Dr. Schulte and colleagues suggest. This would provide a structured approach to identifying and maintaining communication with workers exposed to nanoparticles—especially if future health problems come to light. The authors conclude, "In the face of uncertainty about the hazards of nanoparticles, a corporate or societal response… may assure the public that appropriate efforts are being taken to identify and control exposures in a timely and responsible manner."

Nanotechnology: Should carbon nanotubes be handled in the workplace like asbestos?

NIOSH Science Blog

Nanotechnology poses a question for occupational health and safety professionals. Does this technology, and the tiny nanoparticles that are its tools, pose an unintended risk of illness or injury for workers employed in the industry?

The National Institute for Occupational Safety and Health is at the forefront of the effort to understand the health and safety ramifications of working with nanomaterials. There have been an increasing number of scientific publications from the research community at large—including a new study issued just this week—that address one type of nanomaterial in particular, carbon nanotubes, and seek to determine if they biologically behave like asbestos. That is, if inhaled, are carbon nanotubes likely to cause irreparable and fatal effects such as those associated with asbestos exposure? The effects of asbestos include severe lung fibrosis or scarring, lung cancer, including cancer of the lining of the lungs or pleura called mesothelioma.

The question of a comparison between carbon nanotubes and asbestos arises for several reasons. Some varieties of carbon nanotubes are similar in shape to asbestos fibers, and like asbestos, some varieties of carbon nanotubes have been shown in laboratory studies to persist in the lungs of laboratory animals. Some animal studies have even shown effects similar to those of asbestos.

Carbon nanotubes are tiny, cylindrical, manufactured forms of carbon. There is no single type of carbon nanotube. One type can differ from another in terms of shape (single-walled or multi-walled) or in chemical composition (pure carbon or containing metals or other materials). Carbon nanotube exposures can potentially occur not only in the process of manufacturing them, but also at the point of incorporating these materials into polymer composites, medical nanoapplications, and electronics.

The release of two recent reports, one from a research lab in Japan (Takagi et al., J Toxicol Sci 33:105-116, 2008) and one—this week—from the United Kingdom (Poland et al., Nature Nanotechnology advance online publication, 20 May 2008;[DOI10.1038/nnano.2008.111]) contribute to the carbon nanotube/asbestos fiber comparison debate. The publication of the Japanese study contributed to the decision by the Japanese Ministry of Health, Labor and Welfare to issue a notice which instructs those involved in the manufacture, repair and inspection of nanomaterials that the processes should be carried out under either sealed, unattended or automated conditions, or a local exhaust system should be installed.

The recently published British study adds to the body of work showing an asbestos-like response (more below).

What are the implications of the most recent finding to the risk assessment and risk management of carbon nanotubes in U.S. workplaces?

The question of whether carbon nanotubes pose a toxicological hazard has been investigated since at least 2003. A challenge has been in determining if carbon nanotube materials used in the workplace have the same characteristics as those associated with biological responses in laboratory studies. Earlier studies used materials with high levels of other forms of carbon such as carbon black and high levels of metal catalyst.

Carbon nanotubes can vary widely in diameter, length, number of layers, and structures. They can also vary widely in surface composition, since certain carbon nanotubes may be "coated" with specific metals or other materials in order to perform specific functions. Also, they can clump together or agglomerate, which can affect their potential for settling in the lungs if inhaled, their ability to penetrate the body's membranes and consequently move from the lungs to other organs, and their interaction with cells and tissue. Such variations bring an additional degree of complexity to risk assessment analysis for carbon nanotubes.

In 2005, NIOSH researchers showed that aspiration of single-walled carbon nanotubes in mice caused progressive fibrosis and granuloma formation. Fibrosis and granuloma reduce gas-exchange area in the lung, thus making breathing difficult.) It is estimated that one month of exposure to carbon nanotubes at the airborne concentration of 5 milligrams per cubic meter of air, or mg/m3, would yield an equivalent dose in workers to that causing fibrosis in the mouse.The 5 mg/m3 concentration is sometimes reported on material safety data sheets as a manufacturer's suggested exposure limit for carbon nanotubes and is based on the permissible occupational exposure limit (PEL) for graphite, whose most commonly known use is as a powder for manufacturing pencils. However, the findings reported by NIOSH in 2005 suggest that, on the basis of the effects seen in the laboratory studies, it might not be appropriate to use the graphite PEL for carbon nanotubes. In fact, BSI British Standards Published Document PD 6699-2:2007 “Guide to safe handling and

and disposal of manufactured nanomaterials", suggests setting a benchmark exposure limit for nanoscale fibers longer than 5 µm to one tenth of the PEL for asbestos, that is at 0.01 fiber per cubic centimeter. However, this benchmark exposure limit, described as a "pragmatic guidance level only," was not rigorously developed and is derived "on the assumption that the hazard potential of the nanoparticle form is greater than the large particle form."

This weeks' British study finds that long (that is, longer than 20 micrometer or µm) multi-walled carbon nanotubes exhibit asbestos-like response in the form of injury to the linings of the body cavity in laboratory mice, while short and tangled multi-walled carbon nanotubes do not. A multi-walled carbon nanotube is composed of several nanotubes on a common axis. The Japanese study reports that multi-walled carbon nanotubes were more potent in causing mesothelioma than asbestos in laboratory mice genetically modified to be prone to cancer.

Asbestos-like responses to carbon nanotubes may not be entirely surprising to scientists, given previous toxicological and epidemiological studies of other biopersistent fibers since such studies show that once fibers are deposited in the lung, they stay there. However, questions have been raised about using these research findings for risk assessment analysis in the light of study limitations such as use of model animals, artificial administration methods, and sometimes extremely high doses, which are not representative of those exposures usually present in the workplace environment. Such limitations are not unusual for pioneering scientific studies. They simply mean that at this stage of the research, gaps remain that need to be closed by further study before quantitative risk assessment can be conducted.

How do we protect workers today?

In the workplace, developing and implementing a workplace risk management program (including evaluating the hazards, assessing worker exposures, installing and evaluating engineering controls, establishing procedures for personal protective equipment, and providing worker education and training programs) can minimize worker exposure to carbon nanotubes. NIOSH recommends that such prudent practices be used while scientists continue the research that is needed for better risk assessment. (See NIOSH Approaches to Safe Nanotechnology.) Use of basic engineering control systems such as enclosures and local exhaust ventilation was shown to greatly reduce exposure levels, while filters used in HVAC systems and respirators were reported to capture nanoscale particles with stated levels of efficiency. In addition, medical screening is part of a complete safety and health management program, and established medical surveillance approaches can help to assess whether control measures are effective and identify new or unrecognized problems and health effects.

While the mechanisms of biological responses to carbon nanotubes are not yet fully understood, recent studies such as those from Japan and the UK add to the growing body of peer-reviewed scientific literature and remind the occupational safety and health community that carbon nanotubes should be handled prudently to minimize potential exposures in the workplace and to prevent potential adverse health effects in workers.

—Vladimir V. Murashov, Ph.D.

Dr. Murashov is a Special Assistant for Nanotechnology to the NIOSH Director. He is a member of the U.S. Nanoscale Science, Engineering, and Technology subcommittee. He also leads projects for the ISO Technical Committee 229 (Nanotechnologies) and the Organization for Economic Cooperation and Development's Working Party on Manufactured Nanomaterials.

U.S. Department of Labor releases new “elaws” tool to help employers comply with recordkeeping, reporting and notice requirements

DOL News Release, May 23, 2008

The U.S. Department of Labor today unveiled an elaws advisor that helps employers determine which of the department's recordkeeping, reporting and notice requirements apply to them.

The new FirstStep Recordkeeping, Reporting and Notices elaws Advisor has been integrated into a FirstStep suite of advisors that also includes the revised and expanded FirstStep Poster Advisor and FirstStep Employment Law Overview Advisor.

"These Internet tools will make it easier for small business employers to learn about and comply with the federal laws that apply to them," said Secretary of Labor Elaine L. Chao.

The elaws advisors are free, Web-based tools designed to help employers and workers understand the department's major employment laws. By asking a series of questions, the advisors simulate a conversation with a Department of Labor expert and guide users to customized information explaining the requirements of each law.

By asking questions such as size of business, location and type of industry through multiple choice or yes and no questions, the FirstStep Employment Law Overview Advisor determines which federal employment laws apply to each user. The advisor then provides information from the Labor Department's Employment Law Guide on the basic provisions of these laws.

The new FirstStep Recordkeeping, Reporting and Notices Advisor summarizes the paperwork requirements for each law. The FirstStep Poster Advisor, which can be used to download and print off Labor Department posters for free, was revised to include information on where the posters must be displayed in the workplace, and what size and language requirements apply to each.

This suite of FirstStep elaws advisors is available at www.dol.gov/elaws/firststep.
The department offers more than 25 other elaws advisors covering a wide range of employment law topics, such as minimum wage and overtime, child labor, veterans' workplace rights, health and retirement benefits, and workplace safety and health. For more information, visit www.dol.gov/elaws.

IH Instrumentation: Catch Problems Before They Happen

Occupational Hazards, May 1, 2008, By Kay Mangieri

With an array of gas monitors available, how is a safety professional to decide which one to choose to save his workers' lives?

A wide variety of gas monitors are on the market today. Just take a look at any safety product catalog and you will see a range of seemingly similar gas detectors for industrial use. Many appear to have the same features and may even have the same price.

But this type of safety equipment is not like hard hats or safety boots. Gas monitors are fairly technical products and cost quite a bit more than other personal protective equipment. Plus, they need to be maintained

to continue working properly and safely. So what does a safety manager need to know when choosing the correct industrial hygiene instrumentation for his workplace?

A gas detector is a valuable asset that carries a huge responsibility to keep workers safe from hazardous gases and bring them home alive. The monitors are designed to activate audible, visible and oftentimes vibrating alarms to signal that pre-set low or high alarm levels have been reached or exceeded. Day in and day out, tens of thousands of employees working in some of the toughest environments carry one of these instruments and count on it to provide warnings of unsafe atmospheric conditions.

This is not like the game of horseshoes – close doesn't count here. The monitor must be dead-on, or there may be a fatality. The accuracy necessary to determine unsafe conditions is set by government standards, and is at levels that are in the parts per million (ppm) range.

Good-to-Flawless Execution

For the most part, the sensing technology used by today's gas detection equipment is mature and stable and real time readings of gases in the ppm range are reliable if the right technology is used. However, just like any highly technical product, quality electronics and construction may vary on a scale from good to flawless.

The huge responsibility of protecting workers in some of the harshest environments imaginable should be felt by the manufacturers of gas detection equipment. If quality and reliability are not at the apex of all design and manufacturing decisions, then you must ask, why are they in the business?

Many companies have tried numerous brands, and may even be loyal to one that has been tried and true to their needs. Many others have been greatly disappointed and switched brands because of their dissatisfaction with functionality, high maintenance costs, false alarms or other reasons of insufficient quality.

Look for, and insist on, the highest quality product that will be on the ready to alert your workers of dangerous gases. Seek proof of third-party testing, including UL, CSA, ATEX or other agency certifications that put the instrument through its paces before releasing a certificate of approval. Look for ISO 9001-2000 certification of the manufacturing facility to ensure that quality measures and processes are in place to standardize operating procedures for consistent excellence.

Maintenance and Use

Let's assume you've done your homework: checked specifications, read third-party approvals, ensured quality certifications had been granted and acquired testimonials from colleagues to identify the best gas detector on the market. Once the homework is done and the equipment purchased, some of the real work begins

Once purchased, this equipment takes on a new level of commitment. In the history of gas monitoring we found that manufacturers could supply the highest quality products, but customers didn't maintain them in top working condition. Proper maintenance, including a routine calibration procedure, is critical to keeping the instrument ready for use at a moment's notice. Over the past decade, docking systems have been introduced to automate much of the routine maintenance actions and ultimately increase the level of safety integrity of the equipment.

Understandably, your biggest concern is that the gas monitor does its job when called upon. However, your biggest fear should be whether the workers use it and use it properly. You can have the highest quality gas

detector in the world, but if it sits idle and is not called upon for the job it is intended to serve, then it's all for naught. A personal gas detector is just that – a gas monitor to be used by an individual for the protection against hazardous gases that the worker may encounter.

Sadly, there are far too many accounts of fatalities involving workers found dead from a lack of oxygen or high toxicity levels of a hazardous gas who did not have a gas detector or who had the gas detector turned off.

I remember one account of a city worker whose job included entering a confined space every day. Nearby neighbors were accustomed to seeing the same truck coming and going from the same location, every day. One day, a neighbor noticed the truck was still parked in the same spot, well beyond the normal time. After curiosity and concern brought him to the edge of the underground vault, he saw the city worker on his knees at the bottom of the pit, in what appeared to be a praying position. Thankfully, the neighbor did not venture into the unsafe space, instead calling the municipal authorities.

The concerned neighbor learned later that the worker did not survive. Unfortunately, the gas detector that was assigned to him was found in working condition on the seat of his truck. Was it complacency, a feeling of invincibility or simply forgetfulness that was the fatal error? We never will know.

On the flip side, there are countless testimonials as to how gas monitoring instruments have saved lives and improved the level of safety in the workplace. Yet accidents like the one described above still occur and workers are still injured and killed in gas-related accidents.

This leads to one very clear realization: Manufacturers can design and produce the most reliable and best performing gas monitors possible, and those instruments can be maintained and cared for with the highest level of integrity. But if they are not used properly or not used at all, they cannot perform the function for which they were intended – saving lives.

In cases where the worker has been equipped with a gas monitor that is suited for the job, configured with the appropriate sensors, maintained properly and "bump" tested or calibrated on the day of use, but then consciously decides not to use it, human behavior has impeded the path to safety. That moment of truth may lead to an injury or fatality.

We will never know if the victim considered his or her decision to be risky behavior. What we do know is that behavioral practices can be viewed as leading indicators and predictive in nature. A worker who casually observes the safety rules or consistently overlooks safe practices exhibits behavior that is riskier than another worker who follows all rules and procedures diligently. Therefore, recorded observations of unsafe behavior can be an indicator of the proverbial "accident waiting to happen."

Tracking Behaviors

Today's gas detection instruments are smarter than ever. On-board data logging can record whether an instrument has been turned on, how often the instrument reaches an alarm level, whether the alarms have been turned off, how often the instrument has been calibrated and other telling details. Combining this data with who was using the instrument will map out a pattern of usage and behavior. Analysis of this data can deliver leading indicators on behavior patterns that cause accidents.

There typically are two types of behaviors associated with gas monitoring instruments. The first involves patterns of how the instruments are maintained and the condition in which they are kept. The second relates to patterns of behavior surrounding how the instruments are actually used. The Industrial Scientific iNetTM database provides insight into both types of gas monitoring behaviors.

iNet is a patented, service-based system in which Industrial Scientific Corp. collects data from customers using portable gas monitoring instruments in a variety of industries. The data is retrieved from the instruments via a system of instrument docking stations and is uploaded to the iNet database via the Internet. The data includes information on patterns of bump testing, calibration and diagnostic testing as well as gas exposure data.

Although the primary purpose for collecting this data is to provide proactive instrument maintenance services, the data also can be used to provide insight into the behaviors surrounding the instruments. iNet customers are provided reports indicating the behaviors surrounding the calibration and maintenance of their instruments, as well as reports that summarize instrument and employee exposures to gas hazards and instrument alarming conditions.

It takes quite a commitment to put a gas detection program in place, no matter the size of the organization. Regulatory compliance is just the start of the obligation required to own and operate these life-saving devices.

When you supply the highest quality products and are diligent about keeping them in perfect working condition, but workers don't use them properly, then it is counter effective. If we're going to make a difference in preserving life on the job, then we must address human behavior. If workers leave their instruments in the truck, or turn them off because the alarms are annoying, then the best conceivable quality and service don't matter.

Top-down ownership and support of standard operating procedures of use and maintenance is at the heart of a best practice policy aimed at preserving human life in the workplace. A safety culture that is woven into the policies and procedures of the company inherently will affect the incident rate to a positive degree. Consider a safety audit program that includes behavioral analysis to catch problems before they happen.

Cirque du Soleil Considers Injury Prevention Program

Occupational Hazards, May 28, 2008, by Laura Walter

A new study reveals that performers in Cirque du Soleil shows – known for acrobatic performances that blend theater and circus acts – exhibit the same patterns of injuries found in elite athletes. The study is the first step in developing an injury prevention program to document the frequency and types of injuries that occur among artists in performance companies.

Researchers accessed the Cirque du Soleil injury database and studied 18,000 injuries that occurred from 2002 to 2006. They found that lower extremity injuries of the knee and ankle were most common. The majority of injuries – 45 percent – were to muscles and tendons. Shoulder injuries represented half of all injuries to the upper extremity, while fractures, head injuries and concussions were rare (less than 5 percent combined).

Overall, there was no difference in the anatomical location or types of injuries suffered by males and females, and the pattern of injuries has remained consistent from year to year.

According to Cirque du Soleil, they plan to use the injury surveillance data to establish potential injury trends, develop and implement strategies in order to minimize injury rates and further protect the artists' physical integrity and optimize their performance longevity.

"The common types of injuries you see in trained elite athletes are not unlike what the Cirque du Soleil artists are experiencing when they get injured. There are acute injuries such as sprains and strains, and overuse injuries such as tendonopathies," said Ian Shrier, M.D., Ph.D. "After they rehab, just like other athletes, they have the opportunity to return to performance."

Researchers released their findings of this 5-year study May 28 at the 55th Annual Meeting of the American College of Sports Medicine (ACSM).

DHS Launches Anti-'Procrastination' Campaign for Small Businesses

Disaster Preparedness E-News, May 26, 2008

As hurricane season approaches, the Department of Homeland Security's Ready Campaign and The Advertising Council are reaching out to small businesses and encouraging them to "define their day after" by putting emergency preparedness at the top of their to-do list. A series of national public service advertisements entitled "Procrastination" were released nationwide last week for radio, print, Internet, and outdoor media. Tapping into the natural tendency for individuals to put off making plans for another day, the PSAs focus on what can happen when business owners choose to place making an emergency plan at the bottom of their to-do list.

According to the U.S. Census Bureau, small businesses employ more than half of all Americans. However, Institute for Business and Home Safety research shows that, at the minimum, one in four businesses never reopen following a disaster. "Research conducted by the Ad Council found that more than 85 percent of small businesses understand that emergency preparedness is important, yet only four in ten businesses have a plan to protect their businesses," said DHS Secretary Michael Chertoff. "The ability of these businesses to survive and recover quickly from both natural and man-made disasters directly benefits employees, customers, the community, and the local, and even national, economy."

The "Procrastination" PSAs were created by Neiman Group and mark the third round of national PSAs created for Ready Business, a component of the Ready Campaign. Ready Business is designed to help owners and managers of small- to medium-size businesses prepare their employees, operations, and assets in the event of an emergency by providing practical steps and easy-to-use templates. To date, the Ready Business effort has received more than $91.1 million in donated media support; its Web site has received more than 29.7 million hits and more than 2.6 million unique visitors; and more than 2.3 million Ready Business materials have been requested or downloaded from the Web site. For more information on SBA's disaster program and preparedness tips, and links to the public service announcements and the Nationwide disaster guide, visit www.sba.gov/services/disasterassistance/disasterpreparedness/index.html.

49 CFR Part 107 [Docket No. PHMSA–2008–0010 (HM–208G)] RIN 2137–AE35 Hazardous Materials Transportation; Registration and Fee Assessment Program

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.
ACTION: Notice of Proposed Rulemaking (NPRM).

SUMMARY: This rule proposes to amend the statutorily-mandated registration and fee assessment program for persons who transport, or offer for transportation, certain categories and quantities of hazardous materials. For those registrants not qualifying as a small business or not-for-profit organization, we are proposing to increase the fee from $975 (plus a $25 administrative fee) to $2,475 (plus a $25 administrative fee) for registration year 2009–2010 and following years. The proposed fee increase is necessary to fund the national Hazardous Materials Emergency Preparedness (HMEP) grants program at approximately $28,000,000 in accordance with the Administration's Fiscal Year 2008 budget.

DATES: Submit comments by July 14, 2008.

ADDRESSES: You may submit comments identified by DOT DMS Docket Number PHMSA–2008–0010 by any of the following methods:
• Fax: 202–493–2251.
• Mail: Dockets Management System;
U.S. Department of Transportation, Dockets Operations, M–30, Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE.,Washington, DC 20590– 0001.

- Hand Delivery: U.S. Department of Transportation, Dockets Operations, M–30, Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington,DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Federal Rulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.

Online Hearing Protection Fit Test Tool

From Occupational Health & Safety E-News May 15, 2008

Researchers at NIOSH's Pittsburgh Research Laboratory have developed QuickFitWeb, an online tool to allow users to check their hearing protection in a minute or less. The site notes that ear muffs, ear plugs, and other hearing protection devices can reduce the risk of hearing loss, but only if the wearer gets a good fit and wears them properly. The NIOSH sound player tool allows users to perform a quick test of whether they are getting at least a minimal 15 decibel (dB) level of protection.

The test sounds are bands of random noise with a center frequency of 1000 Hz. This is the same type of sound used in standard hearing protector ratings including the "American National Standard Methods for Measuring the Real-Ear Attenuation of Hearing Protectors" (ANSI S12.6). Both tracks are the same, but the second track is 15 decibels (dB) louder than the first. Most hearing protectors will block or "attenuate" sound by more than 15 dB if they are the right size and shape to fit the ears and are worn correctly. A sound that is barely audible at a worker's threshold of hearing without hearing protection should be inaudible though hearing protection even if it's boosted by 15 dB.

To use the tool, visit www.cdc.gov/niosh/mining/topics/hearingloss/quickfitweb.htm.

Upcoming Events

If you'd like to see your events advertised in this space, and on our website, email your announcement to: baesg.jobs@gmail.com

Local Events:

Environmental Training Center has the following training courses/seminars coming up at Mission College
For more information see: www.envtraining.org

Jun 13 **Title 22 Hazardous Waste Management**
Jun 20 **DOT Transporting Hazardous Materials**

UC Santa Cruz Extension has the following training courses/seminars coming up in Cupertino
For more information see: http://www.ucsc-extension.edu/

Jun 11 – 19 **Applied Ergonomics: Human Factors of Safety and Health**
(4 Sessions- Wednesdays and Thursdays)

Jun 27&28 **Principles of Toxicology** (4 Sessions- Fridays and Saturdays)
Jul 11&12,

Jul 11 **8-Hour Annual HAZWOPER Refresher**

June 25 **EHS Management in the Era of Sustainability: Strategies to Raise Your EHS Profile**
A Free Business Seminar and Luncheon Sponsored by EORM and PureSafety
10:00am - 1:00pm Fairmont Hotel, San Jose, CA Mike Wallace, Wallace Partners, Presenter. Register at: http://www.puresafety.com/eorm/

California Events:

Sep 15-19 **Environmental Management and Training, LLC presents: Seminars @ Sea, 2 Day Environmental Regulation and Compliance Seminar:** Regulatory Overview; Clean Air & Water Acts; Emergency Planning; Hazardous Waste Mngt; Inspections; & EMS. Cruise Ship Port is Long Beach. For more information see: **http://www.learning-at-sea.com/**

National Events:

June 2 – 6 **2008 World Safety Conference and Exposition, National Fire Protection Association**, Las Vegas; For more information see: **http://www.nfpa.org/wsce**

Jun 9—12 **Safety 2008 Professional Development Conference and Exposition,** Las Vegas, American Society of Safety Engineers. For more information see: **http://www.asse.org/speakerpage08**

Jun 24—27 **Air & Waste Management Association's 102nd Annual Conference & Exhibition: "Integrating Science and Sustainability".** Oregon Convention Center, Portland, Oregon. For more information see: **http://www.awma.org/ACE2008**

Employment **O**pportunities

The following positions were collected from a variety of internet job listings and/or postings received directly by the BAESG Jobs Coordinator. BAESG has not verified the informational content of all of these ads.

This newsletter only publishes partial descriptions in the interest of saving space. For more detailed information, phone or email the listed contact. BAESG members who subscribe to the Jobs Announcments Distribution List also receive full descriptions by email. To subscribe, send your request to baesg.jobs@gmail.com.

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Safety Trainer, Environmental Health & Safety, University of California, Santa Cruz, JOB # 0801639

Full Salary Range: $49,700 - $69,500/annually. Salary commensurate with qualifications and experience.

As a member of the Safety Wellness and Injury Management (SWIM) Team, the Safety Trainer plays an integral role in the effective delivery of campus-wide safety training programs. The Safety Trainer will be co-located with other SWIM Team members and is expected to participate in the day-to-day planning and execution of overall SWIM goals, objectives and action plans.

Under the general direction of the Safety Training Coordinator, the Safety Trainer collaborates with management and staff to identify and assess training needs, and develops training strategies, programs and materials to meet safety training performance goals. The Safety Trainer coordinates and delivers training to the campus through a variety of media, and participates in the analysis, design, development, implementation, evaluation and tracking of classroom and online training activities. In addition, the position plays a key role in the ongoing administration and use of the campus Learning Management System (LMS).

APPLICANTS ARE REQUIRED TO USE THE UCSC ON-LINE PROCESS View full job description and access on-line application: https://jobs.ucsc.edu/applicants/Central?quickFind=63381

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Ergonomics Specialist, Environmental Health & Safety, University of California, Santa Cruz, JOB # 0801638

Full Salary Range: $49,700 - $69,500/annually

Under general direction of the Safety Programs Manager, the Ergonomics Specialist (ES) develops and implements major aspects of a comprehensive and integrated ergonomics injury prevention program for UC,Santa Cruz consistent with University of California policy.

Primary responsibilities of this position will be to implement and maintain programs that increase the understanding and practical application of sound ergonomic principles of work, design, and activity for injury prevention. Job tasks include: performing ergonomic work site evaluations, providing ergonomics training, developing and expanding the Departmental Ergonomic Assessor (DEA) program, assisting the Safety Programs Manager in expanding ergonomic services, and performing administrative duties necessary for the daily operation and coordination of the Ergonomics Program.

APPLICANTS ARE REQUIRED TO USE THE UCSC ON-LINE PROCESS View full job description and access on-line application: https://jobs.ucsc.edu/applicants/Central?quickFind=63381

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Manager, EHS Performance

Position Location: 12901 Old River Road Hopland, CA 95449
Hopland is located in Mendocino County, CA and is about 100 miles north of San Francisco.
Relocation provided, although candidates with knowledge of California regulations, preferred.

- Manage all environmental compliance and stewardship activities, as well as employee health and safety programs at our wholly-owned Global Production facilities in California, Europe, and Mexico.
- Broaden your six to ten years of EHS background as you're now focusing on it all: air, waste, water, safety, and more.
- Enjoy a daily vineyard view from your office in Hopland, California where we run on nearly 100% renewable energy as we farm, harvest, and annually bottle over 1 million cases of Fetzer and other wine brands
- Represent Brown-Forman to governmental agencies, non-profit entities, community groups, and trade associations.
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If you're interested in this opportunity, please contact Kacey Brumley at (949) 764-9362. To receive a more detailed description, please e-mail her at **kacey_brumley@b-f.com** or check out the Careers section of our Web-site at **http://www.brown-forman.com/bfjobs/index.htm**.

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Evironmental Specialist for an aircraft and space craft parts manufacturer in Pomona, CA

Work with experts in systems, optics, electronics, mechanical and software engineering at state-of-the art engineering, test, and manufacturing facilities.

Requirements are a BA/BS in Environmental Sciences, or related field, and four years of successful environmental engineering and/or environment program support in a machining environment.

The Environmental Specialist will provide oversight and direction to achieve and sustain compliance to state and federal environmental regulations. They will develop and deploy key environmental programs and policies for multiple facilities. They will work with senior management to develop and provide effective training and programs to support the corporate EH&S Management program. Knowledge of hazardous materials and hazardous waste functions are a must.

If interested in this position, contact: Mary Fisher, of Propel Search Group; Phone 520 207-1393;
Cell 520 490-2780; E-mail: **mary@propelsearchgroup.com;** Web Site: **www.propelsearch.com**

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Industrial Hygiene Program Mgr

EORM is seeking a dynamic industrial hygienist to fill a critical role at our client, Raytheon Space and Airborne Systems, in Goleta, CA. This position is responsible for managing and implementing a complex industrial hygiene program in a semiconductor manufacturing facility at the site. This position will be able to self-create an industrial hygiene approach, which means the successful candidate must be a self-starter who can perform tasks and actively manage the entire industrial hygiene program. This Environmental, Health and Safety (EHS) position will be responsible for creating and implementing solutions in a team environment.

Reference the following link for additional details on this excellent position:
http://search5.smartsearchonline.com/eorm/jobs/jobdetails.asp?current_page=1&job_number=234

BAESG MEMBERSHIP APPLICATION

for both new and renewing members

Annual membership dues are $25.00. ($12.50 for full-time students and retired EH&S professionals). Make your check payable to BAESG and return with this application to:

Membership Director
Bay Area Environmental Safety Group
P. O. Box 60363
Sunnyvale, CA 94088-0363

Personal Information and Company Address (to be listed in the Membership Directory)

Name:_____

Full-time Student? Yes___No___

Certifications (such as CIH, CSP)_____

Job Title (or field of study):_____

Company (or College/University):_____

Address:_____

City, State, and ZIP CODE:_____

Daytime Phone (with area code):_____ **FAX:**_____

Email address:_____

Sponsor: _____

Monthly newsletters will be sent to the above email address.

Areas of Interest:

Please indicate any areas of special interest that you would like to see covered during the monthly meetings, or topics that you would be interested in presenting.

TOPIC:_____

PRESENTING? Yes___No___

☐ **Please check here if you would like to be placed on the Jobs eMail Distribution List to receive Updates of job listings between the monthly publication of the newsletter.**

Email address to which listings should be sent:_____