



NSMS April 2006 DIGEST

Welcoming Our New 2006 NSMS Members

On behalf NSMS President Roosevelt, the NSMS Executive Committee and the NSMS Board of Directors, we like to thank all members who have renewed their 2006 membership to the National Safety Management Society. We would also like to acknowledge and welcome the following new members to our Society:

- § Peter D. Dwan, Dwan Professional Corporation – (Calgary, Alberta - Canada)
- § Craig Lawther, Affiliate/Student Member – (Cranberry Township, PA)
- § Don F. Pride, Sensor Technology Systems – (Beavercreek, OH)
- § Jeff Teideman, State Compensation Insurance Fund – (San Francisco, CA)

We appreciate your interest in furthering your skills, knowledge and abilities in the management of safety and risks, as well as your interest to networking and professional development. Welcome again to NSMS!

Calling All NSMS Members: Volunteers Are Needed for Our National Conference Planning Committee

NSMS is still seeking volunteers to form a working committee for planning our 2006 National Conference. We need the efforts and support of all members to keep the information exchange and networking possible. Without a working group, our goal of a conference may not be met this calendar year. If you are interested in participating, please email us at nsmsinc@yahoo.com or call and leave a message at (800) 321-2910. Please spread the word and get involved! Thank you.

FREE ACCESS: Online Certified Safety and Health Manager (CSHM) Educational and Exam Preparation Reference Materials

As a benefit for our current and future dues-paying members, NSMS is **permanently** offering free access to the Certified Safety and Health Manager (CSHM) preparation and educational

materials. The online resources, created by NSMS member Steve Geigle, can be found at www.cshmprep.com and the only action an NSMS member needs to take is to email Steve requesting access from that website. You will need to include your current NSMS member number (found on your membership card and certificate). Once the number is verified, you will be granted a username and password to access the online reference materials. This is a great opportunity to brush up on your safety management and technical knowledge and prepare for a successful passing of the CSHM certification examination.

FMCSA Could Drop Exemption Requirement for Insulin-Dependent Truck Drivers

The Federal Motor Carrier Safety Administration (FMCSA) is considering amending its medical qualifications standards to allow insulin-dependent drivers to operate commercial motor vehicles (CMV) in interstate commerce without having to obtain an exemption, as is currently required.

FMCSA has the authority to change the standards for drivers, but the current federal highway funding law added a requirement that the standards be developed with the assistance of expert medical advice.

In a March 17 *Federal Register* notice, the FMCSA requests responses to several questions including what quantitative data are there on safety performance of insulin-dependent drivers. Additionally, the FMCSA wants to know what are the potential operational stressors and physical impacts associated with CMV driving that may adversely impact an insulin-dependent CMV operator?

Comments must be received before June 15.

Separately, FMCSA published a rule revising 49 CFR part 386, "Rules of Practice for Motor Carrier, Broker, Freight Forwarder, and Hazardous Materials Proceedings." The rules allow a respondent in a civil penalty proceeding to request an informal hearing, but they don't prescribe specific procedures for conducting informal hearings.

In a March 17 *Federal Register* notice, FMCSA announced it is implementing them in two phases to see how they work. In phase one, the agency will consider requests for an informal hearing only from those whose principal place of business is within the FMCSA Midwest Service Center's geographical area (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin). The first phase began on March 17 and will end Sept. 18. The second phase, nationwide implementation, will begin by Nov. 14.

The *Federal Register* notices can be accessed at http://www.access.gpo.gov/su_docs/fedreg/a060317c.html (scroll down for links to notices).

Tips: Preventing Workplace Eye Injuries

The Bureau of Labor Statistics, U.S. Department of Labor, recently published the results of its latest study of injuries and illness in the workplace. In 2004, 1.3 million American workers were injured on the job and required recuperation away from work. Of that number, 36,680 were eye injuries.

The report also showed that manufacturing or production jobs had the highest eye injury rates, followed by installation, maintenance and repair, and construction. Men comprised 80 percent of the eye injury total and those aged 25-34 reported the most eye injuries. Many of these injuries occurred after being struck by an object or after rubbing the eye once debris had entered it.

According to Prevent Blindness America, about 90 percent of all job-related eye injuries can be prevented simply by wearing the proper protection.

"It is vital for employers and employees to make eye safety a number one priority every single day," said Daniel D. Garrett, senior vice president of Prevent Blindness America. "Even the most skilled and experienced workers can be involved in an unforeseen accident and have their vision altered forever."

Because most of these potentially blinding injuries can be prevented, Prevent Blindness America created the Wise Owl program. The program offers safety education materials to employers so their employees are prepared to avoid eye accidents and recognizes companies and individuals who have saved vision through dedication to eye protection.

As of 2003, the U.S. Department of Labor estimates that eye injuries total more than \$300 million a year in lost production time, medical expenses and worker compensation. Prevent Blindness America has designated March as "Workplace Eye Health and Safety Month" in an effort to raise awareness about the necessity of eye safety on the job. It offers the following tips to promote safety in the workplace:

- Safety eyewear must have "ANSI Z87" clearly marked on all glasses or goggles and should be worn at all times whenever eye hazards are present.
- Workers should know where the nearest eye wash station is at their job site and how to use it.
- Employers should be notified immediately if safety hazards are discovered.
- Employees should have regular eye exams to make sure their vision is adequate to do their jobs safely.
- Those who already have reduced vision should ask their employers if prescription glasses or goggles can be provided.



Prevent Blindness America also provides questions and answers to commonly asked questions about workplace eye safety at <http://www.preventblindness.org/safety/worksafe.html>.

OSHA has an online eTool that provides a comprehensive hazard assessment, information about selecting protective devices for the workplace, as well as OSHA requirements. The eTool can be found at <http://www.osha.gov/SLTC/etools/eyeandface/index.html>.

New Training Tool To Help Workers In Printing Industry Avoid Ergonomic Injuries

OSHA has unveiled an interactive Web-based training tool providing the printing industry with a new resource to help keep workers safe on the job.

"This is an important new resource to help educate workers and employers on avoiding ergonomic-related injuries in the printing industry," said Jonathan L. Snare, acting assistant secretary of Labor for OSHA. "It's designed to provide practical information that is based on the experience of others on how workers can make simple ergonomic improvements to avoid hazards on the job."



The eTool focuses on workers involved in printing processes who may be at risk of developing musculoskeletal disorders (MSDs) from workplace activities which may require them to work outside their physical capacities (e.g., lifting heavy items or lifting too often, or working in awkward body postures).

The first module of the eTool addresses the lithographic printing process. While there are significant variations in the process, the new tool simplifies the overall operation into three broad categories: prepress, press, and finishing and burdening. Users can access specific printing tasks, such as plate making and hand collating, for a description of each task and the potential hazards that have been identified for that job. The user can navigate within each task to become familiar with the hazards and to learn what others have identified as possible solutions.

The Graphic Arts Coalition includes the Printing Industries of America/Graphic Arts Technical Foundation, Specialty Graphic Imaging Association, Flexographic Technical Association, and the Gravure Association of America.

The eTool can be accessed at <http://www.osha.gov/dcsp/products/etools/printing/index.html>.

A Continuous Improvement Approach to Managing a Reactive Ergonomics Program

Most emerging ergonomics programs struggle to just keep up with solving ergonomic issues that have been identified via injuries or complaints. Resolving issues in a reactive manner can give a young program success, but relying on complaints and injuries is not an effective way of sustaining an ergonomics program. Using the quality management tool defined by Edward Deming can be a useful way of implementing and measuring the effectiveness of an ergonomics program. In his work Deming described a continuous feedback loop consisting of four steps: Plan, Do, Check, Act (PDCA).

1. **Plan** - Use Data
 2. To select areas in your facility that are in need of ergonomic improvement
 3. To set targets for expected results (i.e. 10% reduction)
4. **Do** - Implement change and keep records while you are doing it.
5. **Check** - Monitor the effectiveness of changes.
6. **Act** - With successful implementation make it a standard and bring the solution to other areas. If metrics are not affected in a positive manner, revisit solutions targeting the root cause.

Be sure to collect data that can be affected through ergonomic change but do not limit this to just injury data. Typical data sets can include:

- Cumulative Trauma Disorder (CTD) or Repetitive Stress Injury (RSI) incident rates
- Acute Strain/Sprain incident rates
- Safety Incident Rates
- Quality (PPM)/ First Run Yield
- Efficiency (walking time, process requirements, setup times, etc.)
- Scrap Rates
- Floor Space

Tracking these metrics on a monthly basis can help to identify areas that are in need of ergonomic intervention. Target areas that have data spikes or areas that are not performing on par with their counterparts. Continuing to collect metrics after solution implementation can help to evaluate the effectiveness of change and provide data to estimate cost savings. Adding a quality management tool, like PDCA, to an ergonomic toolbox can be an effective way of managing your reactive ergonomics program, ensuring efforts are focused in the right places and tracking your success in terms that can be communicated to upper management.

Sources: Walton, Mary. Deming Management Method. New York: Berkley Publishing Group, 1986. Bourton Group. Continuous Improvement Events. 2001. Available at <http://www.bourton.co.uk>,

Study: Obesity Major Contributor To Employee Health Costs



Obesity was responsible for 2.1 percent of all medical claims dollars for male employees and 2.8 percent for female employees, according to a study in the March *Journal of Occupational and Environmental Medicine*, official publication of the American College of Occupational and Environmental Medicine (ACOEM).

Given the high costs of worker obesity, "Weight management programs may be the most appropriate step for employers interested in wellness initiatives," concluded the study by Dr. Adam Long, Ph.D., of Gordian Health Solutions Inc. in Franklin, Tenn (<http://www.gordian-health.com>).

The researchers analyzed five years' worth of data from 61 employee health plans to estimate claims-level medical costs attributable to obesity. The new study is first in a planned series on the costs associated with lifestyle-related health risk factors. Of 10 lifestyle health risks considered, obesity was by far the most costly -- accounting for approximately 14 percent of lifestyle-related health costs for men and 25 percent for women.

When total costs to the health plan were analyzed, obesity cost \$3.55 per member per month (PMPM) for male employees and \$5.71 for female employees. Since these figures did not include all prescription drug costs, the true PMPM cost was likely even higher.

Obesity-related costs increased with age. Health costs attributable to obesity varied for different industries, but were particularly high in the health care sector.

Lifestyle health risks such as obesity, smoking, stress, and lack of exercise have been a major focus of research and health promotion efforts. However, few studies have focused on how these lifestyle factors affect health costs, particularly in terms of the individual-level cost data on which employers rely in making health plan decisions.

The new study -- using a combination of methods to capture costs on the population and patient levels -- highlights obesity as a major contributor to overall health costs. The results underscore the need for policy initiatives to help individuals and employers address the health impact of body weight issues. Taking action to reduce obesity and other lifestyle health risks increases the opportunities of reducing health claims costs while ultimately lowering employees' disease risk, Long and coauthors concluded.

Fact Sheet: Silica Hazards in Working With Cement Roofing Tiles

Although respirable silica is a recognized health hazard in the construction industry, only recently has this exposure been documented in roofers. NIOSH has measured respirable silica levels up to four times the recommended exposure limit around roofers cutting cement products such as when roofing tiles are cut during the installation process. This cutting generates clouds of silica-containing dust. Respirable silica exposure may also occur when blowers or dry sweeping methods are used to clean the roof. This practice can produce large silica-containing dust clouds. NIOSH does not recommend this practice. Anyone who inhales dust generated by cutting cement tiles or cleaning the residue will be exposed to respirable silica, placing them at risk for developing silicosis.

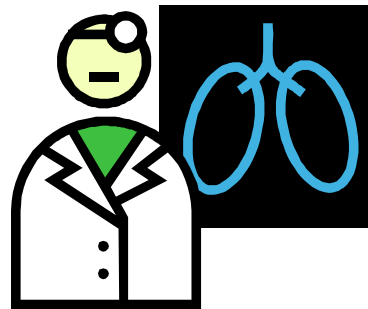
What is Silicosis?

Silicosis is a lung disease caused by breathing dust that has silica in it. The term "respirable silica" is used for silica particles that are small enough to be inhaled and deposited in the deepest parts of the lung. If workers inhale too much respirable silica dust, it causes scar tissue to develop in the lungs, resulting in silicosis. Lung damage may be permanent and disabling and may lead to death. There is no cure for silicosis, but it can be prevented.

Symptoms of Silicosis

Symptoms of silicosis may include:

- Shortness of breath
- Fatigue
- Severe cough
- Chest pain



These symptoms can become worse over time. It is important to see a doctor if you have these symptoms. Be sure to tell your doctor about your job and any silica exposures, so he or she can consider silicosis as a possible cause of your symptoms.

The Facts

- Cement tiles are used on roofs across the United States but are more common in the Southern states.
- Cement tiles can contain silica. The silica content of cement tiles should be listed by the tile manufacturer on a material safety data sheet.
- Cutting, crushing, drilling or blasting the tiles creates silica-containing dust, which workers breathe in.
- Overexposure to silica can cause silicosis.
- More than 1,000,000 U.S. workers are at risk for developing silicosis each year.
- Each year more than 200 U.S. workers die from silicosis and hundreds more become disabled.

Taking Steps to Protect Workers

Controlling exposure to silica dust at the source should be the primary means for protecting workers from silicosis. NIOSH is working with employers and employees in the roofing industry to better understand which tasks in tile roofing may expose roofers to silica dust, and identify practical and effective ways to reduce exposures to silica.

NIOSH is working with roofers, roofing contractors, tile manufacturers, and other interested parties to identify and evaluate the effectiveness of engineering controls for cutting concrete roofing tiles such as: wet cutting methods (water spray or mist); local exhaust/vacuum system; and cutting station on the ground to reduce exposure of coworkers.

Using Respirators

Until respirable silica exposures can be eliminated or reduced below current guidelines, a respirator program should be established. Steps for implementing a respirator program include:

- Regular air monitoring
- Training for workers using respirators
- Use of proper NIOSH approved respirators
- A medical examination of the worker's ability to work while using a respirator
- Testing to make sure respirators fit
- Maintenance, inspection, cleaning, and storage of respirators

Fact sheet from NIOSH. For more information about respirator programs, including what respirators have received NIOSH approval as safe and effective, please visit the NIOSH Web site at: <http://www.cdc.gov/niosh> and click on the respirator link.

Fact Sheet: Electrical Safety Hazards of Overloading Cable Trays



According to the 2005 National Electrical Code® (NEC), a cable tray system is "[a] unit or assembly of units or sections and associated fittings forming a structural system used to securely fasten or support cables and raceways." Cable trays support cable across open spans in the same manner that roadway bridges support traffic. Cable trays are not raceways, and are treated as a structural component of a facility's electrical system. Cable trays are a part of a planned cable management system to support, route, protect and provide a pathway for cable systems.

Cable trays feature flexibility unmatched by conduit, as cables are easier to mark, remove and find in cable trays. Cable trays are available in a number of different configurations, including

ladder, ventilated trough, ventilated channel, solid bottom, wire mesh, single rail and other similar structures. They are manufactured in steel, aluminum and fiber reinforced plastic (FRP), although aluminum accounts for about 70 percent of the cable trays used in industry today.

Overloading cable trays

Cable trays come in a wide variety of sizes. The appropriate size and number of cable trays depends directly on the number and size of conductors intended and the allowable fill area as specified in the NEC. Also, since cable trays offer flexibility for modification and expansion, engineers and designers should plan cable tray systems to be sized and designed to anticipate both current and future needs.

Cable tray fill is addressed in the 2005 edition of NEC Sections 392.8, 392.9, 392.10, and 392.12. The type of cable tray (e.g., solid, ventilated), ampacity requirements, and the type and voltage rating of cable used determines the allowable fill for each cable tray -- ventilated cable trays provide for the greatest allowable fill due to increased airflow. A generic guideline provided by The Cable Tray Institute indicates that cable trays should not be filled in excess of 40-50 percent of the inside area of the tray or of the maximum weight based on the cable tray specifications. The NEC provides specific and more detailed requirements for cable tray fill. In any case, the best strategy is to review and follow the rules set out in the NEC and the manufacturer's installation guides when installing cables in cable trays.

Hazards associated with overloaded cable trays

Overfilling and improperly securing wires in cable trays can lead to a number of serious hazards. Weight is one issue; all cable trays and their associated supports are rated for a specific maximum weight, based partly on the allowable fill area and the spacing of the cable tray supports. Overloading cable trays can lead to a breakdown of the tray, its connecting points, and/or supports, causing hazards to persons underneath the cable tray and even leading to possible electric shock and arcflash/blast events from component failure when the cables are suddenly no longer supported.

Additionally, cables in trays can be damaged by improperly securing and installing other cables and wires in the same cable tray. The NEC requirements for cable tray fill also consider the heat buildup in conductors while current flows. When cable trays are overloaded, excessive heat buildup in and around live conductors can cause the insulation to break down, leading to potential shock hazards or fires. Fires can occur either in the cable tray (which may provide a fire path) or in combustible materials near the cable tray. Furthermore, the improper use of flexible cord could lead to the spread of toxic fumes if a fire were to occur. Grounding of cable tray systems is essential for personal safety and protection against arcing that can occur anywhere in the wiring system. Proper grounding must be done before cables are installed and tested before cables are energized. In addition to these general requirements, metallic cable tray systems supporting electrical conductors must be electrically continuous and effectively bonded as per the requirements of the 2005 edition of NEC Section 392.7.

Recognizing overloaded cable trays

Recognizing overloaded cable trays is not difficult. The fill values for cable trays specified in the 2005 NEC range from a single layer to roughly a 50 percent fill of the cross-sectional area of the cable tray. If visual observation reveals a cable tray that is completely full and/or overflowing with cables, chances are that the cable tray is in violation of both the National Electrical Code and OSHA requirements. One of the major culprits associated with overloaded cable trays are abandoned cables within the tray. These abandoned cables should be removed; and in fact, section 590.3(D) and various sections in Chapter 8 of the 2005 NEC specifically require removal of abandoned temporary wiring and communication cable installed within a cable tray.

Wiring methods permitted in cable trays



Any wiring methods used in cable trays must be listed by a Nationally Recognized Testing Laboratory as suitable for use in cable trays and in the environment in which it is installed. Table 392.3(A) of the NEC and OSHA's 1910.305(a)(3)(i) provide corresponding lists of conductors and raceways permitted in cable tray systems.

Additionally, NEC Section 392.3(B) and OSHA's 1910.305(a)(3)(i)(B) allow other specific conductors in industrial establishments where maintenance and supervision assure that only qualified people will service the cable tray systems. Flexible cords are not currently listed for use in cable trays (NEC Article 400, OSHA, 1910.305(g)) as they are prohibited as a replacement for the fixed wiring of a structure. The insulation on flexible cords can break down and become brittle over the years, which can lead to shorts and fires containing toxic fumes.

Standards and regulations that apply to cable trays

Cable trays were first covered in the 1965 edition of the NEC, under Continuous Rigid Cable Supports. Today, the use and installation of cable trays is covered by Article 392 of the NEC, and by OSHA regulations in 29 CFR 1910.305(a)(3) and 1910.399, or comparable standards promulgated by States operating OSHA-approved state plans. Specific permitted uses of cable trays are covered by the 2005 edition of NEC Section 392.3 and OSHA's 1910.305(a)(3)(i); uses not permitted are addressed in NEC 392.4 and OSHA's 1910.305(a)(3)(ii). Other sections and articles of the NEC are referenced throughout Article 392 for specific installation and use issues. The National Electrical Manufacturers Association (NEMA) also publishes three standards that apply to the proper manufacture and installation of cable trays: ANSI/NEMA-VE 1-1998, Metal Cable Tray Systems; NEMA-VE 2-1996, Metal Cable Tray Installation Guidelines; and NEMA-FG-1998, Nonmetallic Cable Tray Systems.

Study: Hands-Free Devices Impair Driving

Does a hands-free device make it safer to talk on a cell phone while driving? According to one study, a driver's performance is impaired when distracted by even the simplest tasks, whether or not both hands are on the steering wheel.

Until now, the slowing of reaction time under multitasking conditions, referred to as the psychological-refractory-period (PRP) effect, has been studied mainly with simple tasks in laboratory settings. But a new research study presents a unique perspective of how the PRP effect pertains to driving, perhaps the most ubiquitous real-world task where non-optimal performance can have serious consequences.



The study was conducted by University of California, San Diego scientists Jonathan Levy and Harold Pashler, along with Erwin Boer of ERB Consulting. Their research appears in the article "Central Interference in Driving: Is There Any Stopping the Psychological Refractory Period?" in the March issue of *Psychological Science*.

Forty students participated in the study, which involved driving a car simulator, composed of a large plasma screen, a steering wheel, and gas and brake pedals located on the floor. In the simulation, students followed a lead car and were instructed to brake as soon as they saw the illumination of the lead car's brake lights (they were instructed to avoid gradual slowing even if it was possible). While subjects performed the braking task, they occasionally were required to respond to a concurrent easy task, where a stimulus -- either a light flash in the lead car's rear window or an auditory tone - was randomly presented once or twice. Participants indicated the stimulus' frequency, sometimes by pressing a key on the steering wheel once or twice and sometimes by saying aloud the words "one" or "two."

Subjects in the study braked more slowly when the easy task's stimulus was presented simultaneously or shortly before the brake lights, thereby demonstrating the PRP effect occurs with "real-world" tasks. Participants were 174 milliseconds slower at braking when the two tasks occurred at the same time than when they were presented 350 milliseconds apart. While 174 milliseconds may sound tiny, it translates to 16 feet in a car going 65 mph. Responses were just as slow with auditory stimuli (tones) and vocal responses compared to visual stimuli (light flashes) and manual responses, meaning that even tasks that do not have a visual or manual component (like hands-free talking) can still lower response times when driving.

"This study joins a growing body of research showing that 'freeing up the hands' does not result in faster brake response times," said Levy, the lead author on the project. "Not everyone appreciates the processing cost while driving imposed by carrying out other tasks, even easy ones."

The article can be downloaded at http://www.psychologicalscience.org/pdf/ps/hands_free.pdf.

NTSB Calls For Adequate Rest Time For Train Operators

The National Transportation Safety Board (NTSB) determined last Thursday that the probable cause of a crash involving two Washington Metropolitan Area Transit Authority (WMATA) trains in 2004 was the failure of one train's operator to apply the brakes, probably because of his "reduced alertness."

Contributing to the accident was the lack of a rollback protection feature to stop the train, when operated in the manual mode, the NTSB stated on March 23.

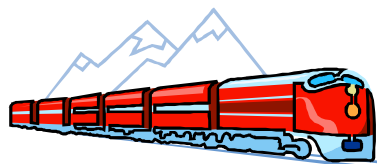
"Implementation of the safety board's recommendations on roll back protection and adequate time off between shifts for train operators will enhance safety for thousands of persons who use these trains daily," said NTSB Acting Chairman Mark Rosenker.

On Nov. 3, 2004 train 105, was in the process of discharging and loading passengers when it was struck by non-revenue train 703, which was traveling approximately 35 miles per hour after rolling backwards for more than 2,200 feet. There were no fatalities. About 20 passengers went to the hospital and property damage was estimated at \$3 million.

On Nov. 7, 2004, WMATA issued a memorandum to all train operators and Metrorail supervisors concerning the absence of a rollback protection feature on the Rohr 1000-series cars when operated in the manual mode. Two days later, WMATA issued a supplement to its previous memorandum extending the reminder to cover the entire fleet of Rohr cars.

On Nov. 22, 2004, the safety board issued an urgent safety recommendation to WMATA to immediately revise the directions to train operators contained in those two post-accident memorandums to include specific written instructions for identifying and responding to emergency rollback situations, and provide training to operators on the procedures to follow if such a rollback event occurs.

WMATA responded to the safety board's urgent recommendation on Nov. 23, 2004, issuing new bulletins again reminding operators that in the manual mode there is no rollback protection except in the rehabilitated Breda cars. WMATA also advised operators to take the following actions in the event of a rollback: in manual mode, a rollback is stopped by application of the train brakes; should a rollback of greater than five seconds occur, the operator shall apply maximum service brakes by pulling the brake handle to the B4 position; and should the train not stop within another four seconds, the operator shall apply the emergency brakes by releasing the safety handle or by depressing the emergency stop button.



On May 31, 2005, pending instructions to include the discussion of speed in the written instructions for identifying and responding to a rollback situation, the Safety Board classified the urgent recommendation "Open-Acceptable Response."

In a letter dated Feb. 15, 2006, to the safety board, WMATA declined to include written instructions to operators suggested by the board.

The safety board simulation testing found that trains that did not have the rollback protection feature could not be controlled by applying power by the operator when the train speed exceeded 2 mph in a rollback situation. In a March 23 board meeting, the safety board reclassified that urgent safety recommendation from open-acceptable response to open-unacceptable response.

During the Safety Board's investigation, it noted that the train operator's inadequate sleep may have contributed to his failure to respond to the train's 78-second rollback and prevent the accident by applying the brakes.

As a result of its investigation, the safety board made the following recommendations:

To the Washington Metropolitan Area Transit Authority:

Equip, as soon as possible, all existing and future trains with rollback protection for trains operated in the manual mode.

Either accelerate retirement of Rohr-built railcars, or, if those railcars are not retired but instead rehabilitated, then Rohr-built passenger railcars should be retrofitted with crashworthiness collision protection that is comparable to 6000-series railcars.

To the Federal Transit Authority:

Require transit agencies, through the system safety program and hazard management process if necessary, to ensure that the time off between daily tours of duty, including regular and overtime assignments, allows train operators to obtain at least eight hours of uninterrupted sleep.

Assess the adequacy of WMATA's current organizational structure and ensure that it effectively identifies and addresses safety issues.

Develop transit railcar design standards to provide adequate means for safe and rapid emergency responders' entry and passenger evacuation.

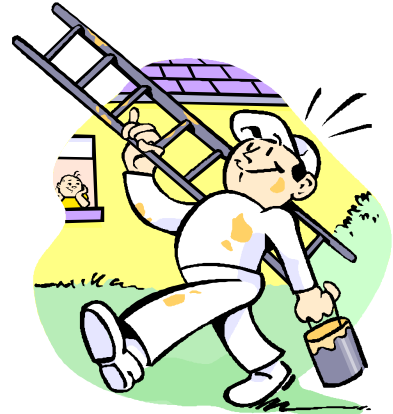
Develop minimum railcar design standards to provide adequate standards to prevent telescoping of transit railcars in collisions and establish a timetable for removing equipment that can not be modified to meet the new standards.

A synopsis of NTSB's report including a complete listing of conclusions and recommendations is available on the Railroad Publications page of the board's Web site, <http://www.nts.gov>.

Safety Tip: Storing and Transporting Ladders (Courtesy of Oregon OSHA)

Storing ladders – Prolong a ladder's life by storing it properly:

- Use a well-ventilated storage area.
- Store wood and fiberglass ladders away from excessive moisture, heat and sunlight. Keep them away from stoves, steam pipes or radiators.
- Store non-self-supporting ladders in flat racks or on wall brackets that will prevent them from sagging. Store stepladders vertically, in a closed position, to reduce the risk of sagging or twisting. Secure them so that they won't tip over if they are struck.
- Keep material off ladders while they are stored.



Transporting ladders –

- When you hand-carry a ladder, keep the front end elevated, especially around blind corners, in aisles and through doorways. You'll reduce the chance of striking another person with the front of the ladder.
- When you transport a ladder in a truck or a trailer, make sure that it's properly supported parallel to the bed. Pad the support points with soft, non-abrasive material such as rubber or carpeting and tie the ladder securely to eliminate chafing and road shock.

Appeals Court Upholds Reinstatement of Airline Whistleblower



The U.S. Court of Appeals for the First Circuit has denied a petition by Vieques Air Link Inc. (VAL) to review a Labor Department (DOL) order mandating reinstatement and back pay for a pilot who was terminated from the Puerto Rico-based airline after he raised safety concerns, OSHA announced on March 9.

The decision by Circuit Judges Juan R. Torruella and Kermit Victor Lipez and District Judge Joseph A. DiClerico Jr. upholds earlier findings that VAL violated the whistleblower provisions of the Wendell H. Ford Aviation

Investment and Reform Act for the 21st Century (AIR 21) when it suspended, then fired, the pilot shortly after he brought safety concerns to the attention of both his employer and the Federal Aviation Administration (FAA) in March 2002. The pilot had been suspended, transferred and later fired because he complained to both management and the FAA about several instances where VAL failed to determine the weight aboard one of its planes properly before flying.

The pilot filed a complaint with OSHA, which investigates whistleblower complaints under AIR 21. OSHA's investigation found reasonable cause that the complaint had merit.

An Administrative Law judge (ALJ) subsequently issued a concurring decision ordering the airline to reinstate the pilot and pay him a total of \$72,315, plus interest, in back wages, compensatory damages and medical and legal fees. The department's Administrative Review Board upheld the ALJ decision, after which VAL petitioned the court of appeals.

"It is vital that employees be able to raise safety concerns to their employers and appropriate public safety agencies without fear of retaliation," said Patricia K. Clark, OSHA's regional administrator in New York, whose office investigated the complaint. "This decision reaffirms both the right of employees to seek safe working conditions and the Labor Department's commitment to take the necessary steps to protect that right."

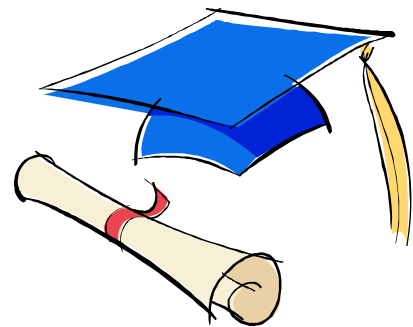
OSHA administers the whistleblowing provisions of 14 statutes. Information about employees' rights and employers' responsibilities under the whistleblower provisions of those laws may be found on OSHA's Web site at <http://www.osha.gov/dep/oia/whistleblower/index.html>.

The opinion for *Vieques Air Link Inc vs. U.S. Department of Labor* can be found at <http://www.ca1.uscourts.gov>.

TIPS AND TACTICS FOR SAFETY TRAINERS – OSHA SAFETY TRAINING NETWORK DIGEST (3/8/06)

What is Education?

- Anything that affects our knowledge, skills, and attitudes (KSA's) .
- Ed-u-er-e? (ey-doo-ker-ey) Latin - that which leads out of ignorance.
- Education is continual. We are always being educated.



Two Types of Safety Education

Safety Instruction

All employees receive general safety education through work experience, orientations, safety meetings, and classroom presentation. Some important characteristics of general instruction include:

- General/Specific safety information is presented. Much of safety instruction focuses on "why" being safe is important to the employee.

- Learner knowledge and skills are not measured at the end of training. There's no testing involved in the presentation.
- Trainers might write training and learning goals as appropriate. Sample training goal: "Present an overview of the importance of safety incentives and recognition." Sample learning goal: "Gain a greater awareness of the types of hazards in the workplace."
- Learning objectives are not required because KSA's are not evaluated.
- All the learner need do do is attend the presentation to get credit or certificate
- Measurement focuses on student's reaction to the content and learning process. The trainer does not evaluate learning.
- Measurement tools include - "smile sheet" and other student evaluation forms

Technical Safety Training

Most workplace accidents are the result of unsafe behaviors. To make sure employees behave, they not only need to know why using safe procedures and practices is important, they need know how to actually perform those procedures and practices. Characteristics of safety training include:



- Technical training focuses on training how to comply with specific safety policies, procedures, and practices
- Trainers must may write training and learning goals. But it's not required. Sample training goal: "Train learners how to correctly perform a lockout/tagout procedure." Sample learning goal: "Correctly perform all steps of a lockout/tagout procedure."
- Trainers should write operational learning objectives to comply with ANSI Z490.1-2001. Sample operational objective: "By the end of the training session, given the equipment and requirement to perform a simulated procedure, the learner will be able to describe and correctly perform all steps of the lockout/tagout procedure for the equipment."
- The learner knowledge and skills are measured immediately after training in the learning environment. Some sort of simulated condition is given that allows the learner to practice and demonstrate competency.
- The learner must "pass a test" in class to get credit or a certificate. Measurement tools include oral/written exams and skill demonstrations
- Technical training is far more common than instruction and is the type of education most required by OSHA standards.
- Remember, technical training should be a "hands-on-how-to" presentation

Safety Training Strategies – Safety Idol

A company recently had a quarterly safety meeting. There was a skit spoofing the TV show, “American Idol”. They called it **Safety Idol**. Some employees performed as singers (to use the term loosely) and they sang about safety. Employees didn’t have it performed live; they were allowed to be videotaped and their performance was shown to each work shift. It was a hilarious experience. The panel of judges played Simon, Paula, and Randy and it was their job was to determine who should pass to the next round which was where the employees determined the winner. The judges were as funny as the performers. The performers had some really good safety lyrics in their performances. The activity helped to drive home safety. The tunes the performers picked ranged from "Mary Had a Little Lamb" to an old Platters tune. The employees really enjoyed it.

Safety Tidbits (from "Safety Stuff" by Richard Hawk Inc. <http://www.richardhawkinc.com>)

- Twenty percent of all road accidents in Sweden involve a moose. (Sweden averages ten moose-car collisions a day).
- Technically speaking (whatever that means), coffee is a fruit juice.
- According to Gallup: 32% of Americans lose sleep due to stress on a weekly basis.
- Your risk of injuring yourself seriously enough to require medical attention while shaving this year: 1 in 7,000.
- It has been estimated that banging your head against a wall every ten seconds consumes 150 calories in an hour.
- Studies done on cutting boards, both wooden and plastic, have shown an average of 62,000 bacteria per square inch (9,300/sq. cm).
- In England, drunk driving became illegal in 1872.
- There is a Swiss Army knife with 31 features, including a tool for emergency tracheotomies.

SUDSY SUIT

Bernd Naveke, 49, worked as a brewer and beer taster for 20 years until being forced to leave his job because he had become an alcoholic. In 2000 he sued The Brahma Brewery, saying that for the 20 years in their employ he had to drink eight liters (about two gallons) of beer daily and even more during holiday seasons. "I left work drunk every day," Naveke said.

Was it the brewer's fault that he was an alcoholic? The court thought so: Naveke was awarded \$30,000 and a monthly pension of \$2,600 for the rest of his life. But he thought it wasn't enough. In 2004 the appeals court agreed . . . and awarded him a lump sum of \$2 million.

HUMOR CORNER: “SMOOTH, WITH A HINT OF TUNGSTEN”

There used to be a strange initiation rite for men drafted into an artillery regiment in France. Recruits had to drink a glass of white wine that had flowed through the barrel of a 155-millimeter gun after several shots had been fired.

Then one day a 19-year old soldier developed seizures and was taken to the hospital unconscious and unresponsive to stimuli. He had extremely high levels of tungsten in his blood, and doctors traced the source to the wine. It seems the composition of gun barrels had recently changed with the inclusion of tungsten for hardness, tungsten steel being especially hard. Other recruits were spared because they had vomited immediately after drinking the wine. Since then the French army has banned the hazing ritual.

HUMOR CORNER: “HERE DOGGY--YIKES! “

Gordon Husband, 66, was walking his collie Shadow near the River Wye in Hampton Bishop, England. He threw a stick into some brush for the dog, and the dog promptly returned with a live hand grenade in its mouth. (The site was near an abandoned army base.) Husband gently took the grenade from Shadow's mouth and called police. A bomb unit came and exploded the device. "Shadow is always coming back from the river with stuff," the relieved owner said, "but usually just rubber balls."



Wacky Warnings – SAFETY (Bumper) STICKERS

“Buckle up--it makes it harder for the aliens to snatch you from your car.”

“Don't Drink and Derive. Alcohol and Calculus Don't Mix.”

“Whenever I Feel Blue I Start Breathing Again.”