

Workplace Safety Advisor

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OSHA publishes interim guidance on Hazcom regulation

OSHA published an interim enforcement guidance to provide additional information on the Hazard Communication 2012 June 1, 2015, effective date. The guidance supplements a February 9, 2015, memorandum.

Both guidance documents address the issue of manufacturers, importers, and distributors being able to supply safety data sheets (SDSs) and Hazcom 2012-compliant labels when they have not received necessary classification information from upstream suppliers.

OSHA is giving these entities extended time, if certain conditions are met as outlined in the guidance. Employers should be aware that, although the deadlines have or will pass, they may still receive chemicals that are not labeled per the new requirements. In addition, they may still receive MSDSs, rather than SDSs. This enforcement policy will end, however, when OSHA publishes a new compliance directive, which is expected to be soon.

See *Hazcom*, page 2

What's New?

Injuries/illnesses - Latest numbers

Nonfatal

- Total recordable cases: 3,007,300
- Cases involving days away from work: 917,100
- Median days away from work: 8
- Cases involving sprains, strains, tears: 327,060
- Cases involving injuries to the back: 170,450
- Cases involving falls, slips, trips: 229,190

Fatal

- Total: 4,585
- Roadway incidents: 1,099
- Falls, slips, trips: 724

Source: Bureau of Labor Statistics CY13 injury/illness data

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Guidance for manufacturers and importers of hazardous chemicals

Where a manufacturer or importer has not received classification information from its upstream supplier(s) on which it intends to rely for the classification of its product before June 1, 2015, the manufacturer or importer may continue use of the HCS 1994 label under certain limited circumstances. To do so, the manufacturer or importer must be able to initially demonstrate it has exercised reasonable diligence and made good faith efforts to obtain and integrate the information.

OSHA will review the overall efforts and actions taken to comply. No citation will be issued in cases where the manufacturer or importer provides persuasive documentation to show that it made reasonable efforts to obtain the necessary information from upstream suppliers, and attempted to find hazard information from alternative sources (e.g., chemical registries) to classify the data. In these limited situations, manufacturers and importers must promptly create HCS 2012-compliant labels within six months after they develop the updated SDS. All containers shipped after the six-month period must be labeled with an HCS 2012-compliant label.

Manufacturers or importers of hazardous chemicals (including businesses that repackage) that have existing stock packaged (e.g., boxed, palletized,



shrink-wrapped, etc.) for shipment prior to June 1, 2015, that are HCS 1994-compliant labeled, may continue to ship those containers downstream. In such instances, there is no requirement to re-label packaged-for-shipment containers with HCS 2012-compliant labels. The manufacturer or importer must provide HCS 2012-compliant labels and SDSs for each and every individual container shipped, unless the manufacturer or importer can demonstrate that it exercised reasonable diligence and good faith as discussed in this policy.

After June 1, 2015, a manufacturer or importer of hazardous chemicals who packages containers for shipment must label each and every container with a HCS 2012-compliant label prior to shipping.

Guidance for businesses that repackage, blend, or mix hazardous chemicals

Some businesses repackage, blend, or mix hazardous

chemicals, but consider themselves to be distributors in the supply chain. Under the HCS, however, they are considered manufacturers, and the labeling guidance discussed earlier for manufacturers and importers applies to them as well.

Guidance for distributors of hazardous chemicals

The HCS 2012 permits distributors to continue to ship chemicals with HCS 1994 labels until December 1, 2015. There may be distributors that are consequently unable to comply with the December 1, 2015, effective date where a manufacturer or importer cannot comply with the June 1, 2015, effective date despite its reasonably diligent and good faith efforts. In these situations, OSHA will determine whether the distributor has evidence that it has in fact exercised reasonable diligence and good faith to comply with the December 1, 2015, effective date.

Before December 1, 2015, distributors with existing stock packaged (e.g., boxed, palletized, shrink-wrapped, etc.) for shipment and containers that are HCS 1994-compliant labeled, may continue to ship those containers downstream. In these instances, there is no requirement to re-label packaged-for-shipment containers with HCS 2012-compliant labels. Distributors must provide an HCS 2012-compliant label and SDS for each and every individual container shipped with any future shipments after December 1, 2015 or upon request, unless they can demonstrate reasonable diligence and good faith. Additionally, distributors must provide HCS 2012-compliant SDSs to downstream users with the first shipment after a new or revised SDS is provided by the manufacturer or importer.

All containers in the control of a distributor after December 1, 2017, must be HCS 2012-compliant labeled prior to shipping.

What are reasonable diligence and good faith efforts?

To determine if a manufacturer or importer was reasonably diligent and made good faith efforts to obtain and integrate updated information, OSHA will review overall efforts and action(s) taken to comply with HCS 2012. OSHA will request that manufacturers or importers provide documentation of any and all efforts to:

- Obtain classification information and SDSs from upstream suppliers;

- Find hazard information from alternative sources (e.g., chemical registries); and,
- Classify the data themselves.

Establishing reasonable diligence and good faith requires that manufacturers or importers demonstrate attempt(s) to obtain the necessary SDSs through both oral and written communications directly with the upstream supplier. For each hazardous chemical shipped by a manufacturer or importer after June 1, 2015 that does not comply with HCS 2012, OSHA will consider whether the manufacturer or importer:

- Developed and documented the process used to gather the necessary classification information from its upstream suppliers and the current status of such efforts;
- Developed and documented efforts to find hazard information from alternative sources (e.g., chemical registries);
- Provided a written account of its continued communications with upstream suppliers, including dated copies of all relevant written communication;
- Provided a written account of continued communications with its distributors, including dated copies of all relevant

written communication with its distributors informing them why it has been unable to comply with HCS 2012; and,

- Developed the course of action it will follow to make the necessary changes to SDSs and labels once the information becomes available.

Although OSHA will evaluate all of the above factors, any combination of these efforts may be considered to be reasonably diligent and made in good faith. OSHA will also consider whether the manufacturer or importer attempted to obtain the hazard information in a timely manner (i.e., in a way that would have enabled it to comply with the June 1, 2015, effective date) in determining whether reasonable diligence and good faith efforts to comply are present. Additionally, manufacturers or importers should provide a clear timeline when they expect to comply with HCS 2012 to meet this test. ♦



PSM coverage: OSHA changes policy on concentration of chemicals

On June 8, 2015, OSHA enforcement staff issued a memorandum for regional administrators and state plan designees that revised the enforcement policy on the concentration of a chemical that must be present in a process for the purpose of determining whether the chemical is at or above the threshold quantity listed in Appendix A of the Process Safety Management of Highly Hazardous Chemicals (PSM) standard (29 CFR §1910.119).

OSHA will now use a “one percent test” similar to that adopted by EPA for enforcement of the Clean Air Act Amendments. This means that, for purposes of OSHA PSM, when an employer is determining whether a process involves a chemical (whether pure or in a mixture) at or above the specified threshold quantities listed in §1910.119 Appendix A, they must calculate:

- The total weight of any chemical in the process at a concentration that meets or exceeds the concentration listed for that chemical in Appendix A, and
- With respect to chemicals for which no concentration is specified in Appendix A, the total weight of the chemical in the process at a concentration of one percent or greater. However, the employer need not include the weight of such chemicals in any portion of the process in which the partial pressure of the chemical in the

vapor space under handling or storage conditions is less than 10 millimeters of mercury (mm Hg). The employer must document this partial pressure determination.

In determining the weight of a chemical present in a mixture, only the weight of the chemical itself, exclusive of any solvent, solution, or carrier is counted.

The prior OSHA policy, which is no longer valid, used maximum commercial grade or pure (chemical) grade as a determining factor for coverage. OSHA was concerned that this policy did not adequately account for the potential of some chemicals listed in Appendix A without specified concentrations to retain their hazardous characteristics even at relatively low concentrations. EPA had concluded years ago that even one-percent solutions of regulated substances may “reasonably be anticipated” to cause effects of concern in an accidental release. OSHA’s prior maximum commercial grade policy provided no clear threshold above which a chemical mixture was covered, and could permit dangerous

concentrations of hazardous chemicals in mixtures to be exempted from PSM coverage, OSHA now says.

The change in policy is in accordance with the President’s August 1, 2013, Executive Order 13650, Improving Chemical Facility Safety and Security.

In a separate PSM memorandum, OSHA also provided guidance on the enforcement of the standard’s recognized and generally accepted good engineering practices (RAGAGEP) requirements, including how to interpret “shall” and “should” language in published codes, standards, published technical reports, recommended practices (RP) or similar documents, and on the use of internal employer documents as RAGAGEP. Employers covered under PSM should review the document in light of their current RAGAGEP. ♦



When is it considered “construction work”?

OSHA recently issued a new rule for construction work involving confined spaces. While it's clear that the rule applies only to construction work, it's not clear the scope of work that is considered “construction work.” Can a general industry employer be covered by this and other construction rules?

Construction work defined

OSHA's regulations define construction work as “construction, alteration, and/or repair, including painting and decorating.” 29 CFR 1910.12(a) further provides that OSHA's construction industry standards apply “to every employment and place of employment of every employee engaged in construction work.”

Maintenance work not defined

Unlike construction work, there is no regulatory definition for “maintenance,” nor a specified distinction between terms such as “maintenance,” “repair,” or “refurbishment.” “Maintenance activities” have commonly been defined in dictionaries as making or keeping a structure, fixture or foundation (substrates) in proper condition in a routine, scheduled, or anticipated fashion. In OSHA's directive on the general industry confined space standard, the Agency stated that maintenance involves “keeping equipment working in its existing state, i.e., preventing its failure or decline.”

In applying this concept to the broad range of circumstances

encountered in the construction industry, several factors must also be considered.

Not limited to new construction

Construction work is not limited to new construction, but can include the repair of existing facilities or the replacement of structures and their components. For example, the replacement of one utility pole with a new, identical pole would be maintenance; however, if it were replaced with an improved pole or equipment, it would be considered construction.

Scale and complexity key

In addition to the concept of one-for-one replacement versus improvement, the scale and complexity of the project are relevant. This takes into consideration concepts such as the amount of time and material required to complete the job. For example, if a steel beam in a building had deteriorated and was to be replaced by a new, but identical beam, the project would be considered a construction repair rather than maintenance because of the replacement project's scale and complexity. Also, if a bridge was to be stripped and re-painted, that would be considered construction work even if the repainting were done on a scheduled basis. Replacement of a section of limestone cladding on a building, though not necessarily a large project in terms of scale, would typically be considered construction because it is a complex task in



view of the steps involved and tools and equipment needed to do the work.

As discussed in an OSHA letter of interpretation, the physical size of an object that is being worked on can be a factor if, because of its size, the process of removal and replacement involves significantly altering the structure or equipment that the component is within. This is another example of how the project scale and complexity is relevant—if the process of removal and replacement is a large-scale project, then it is likely to be construction. It is not the classification of what an employer is working on as “equipment” or “structure” that is significant, but rather the project's scale and complexity.

Characteristics such as the material of the component are sometimes relevant in determining what specific standards apply, although by themselves such characteristics are unlikely to be an important factor in deciding whether an activity is considered maintenance or construction.

See Construction, page 6

Construction, from page 5

Not the personnel, but the work

Whether the work is performed in-house or by an outside contractor is not a factor; it is not the personnel which will determine whether work will be considered maintenance or construction, but the work itself.

Work that is anticipated, routine and done on a regularly scheduled/periodic basis to help maintain the original condition of the component, will be suggestive of "maintenance," although this must be considered in light of the scale of the project. For example, whether a tank in a steel mill is repaired and reused versus

replaced is not determinative. If the work consists of repair as opposed to replacement, a key factor is whether those repairs are extensive. If the work consists of removal and replacement of equipment, an important factor is whether the new equipment is of an improved type. For both the cases of repair and replacement, a key factor is the scale of the project, including the extent to which other equipment or structures must be moved, altered, etc. as discussed above.

Note that, though the work may itself occur during a scheduled "maintenance outage," this alone is not enough to qualify it as maintenance. For example, it is possible that

the work may be construction, but scheduled during a maintenance outage to minimize lost productivity.

For more information see the following Letters of Interpretation:

- 11/18/2003 - Clarification of maintenance vs. construction activities
 - 05/11/1999 - Maintenance vs. construction; working from fixed ladders
 - 02/01/1999 - The difference between maintenance and construction; scaffold inspection requirements; and definition of periodic scaffold inspection
 - 8/11/1994 - Memorandum for Regional Administrators
- ◆

OSHA adds key hazards for investigators' focus in healthcare inspections

Targeting some of the most common causes of workplace injury and illness in the healthcare industry, OSHA announced the agency is expanding its use of enforcement resources in hospitals and nursing homes to focus on: musculoskeletal disorders related to patient or resident handling; bloodborne pathogens; workplace violence; tuberculosis; and slips, trips and falls.

U.S. hospitals recorded nearly 58,000 work-related injuries and illnesses in 2013, amounting to 6.4 work-related injuries and illnesses for every 100 full-time employees: almost twice as high as the overall rate for private industry.

"Workers who take care of us when we are sick or hurt

should not be at such high risk for injuries – that simply is not right. Workers in hospitals, nursing homes and long-term care facilities have work injury and illness rates that are among the highest in the country, and virtually all of these injuries and illnesses are preventable," said Dr. David Michaels, assistant secretary of labor for occupational safety and health. "OSHA has provided employers with education, training and resource materials, and it's time for hospitals and the health care industry to make the changes necessary to protect their workers."

OSHA has advised its staff through a memorandum that all inspections of hospitals and nursing home facilities,

including those prompted by complaints, referrals or severe injury reports, should include the review of potential hazards involving MSD related to patient handling; bloodborne pathogens; workplace violence; tuberculosis; and slips, trips and falls.

"The most recent statistics tell us that almost half of all reported injuries in the healthcare industry were attributed to overexertion and related tasks. Nurses and nursing assistants each accounted for a substantial share of this total," added Dr. Michaels. "There are feasible solutions for preventing these hazards and now is the time for employers to implement them." ◆

EPA releases technical guides on vapor intrusion, could be encroaching on OSHA jurisdiction

On June 11 the U.S. Environmental Protection Agency (EPA) released two technical guides to support assessment and mitigation activities at sites where vapor intrusion is an actual or potential concern.

The Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air applies to all sites being evaluated under federal land cleanup statutes by EPA, other federal agencies, state and tribal governments and brownfield grantees. A companion document, the Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites addresses any sites where vapor intrusion related to petroleum contamination from underground storage tanks is a potential concern. Both guides are applicable to residential and non-residential settings.

Vapor intrusion refers to the migration of hazardous vapors from contaminated subsurface sources such as groundwater through soil into overlying buildings and structures. Exposure to these vapors by building occupants can potentially pose both acute and chronic health risks. Vapor intrusion is a potential concern at any building located near soil or groundwater contaminated with vapor-forming toxic chemicals.

National awareness and concern about vapor intrusion has grown over the last several decades. At the same

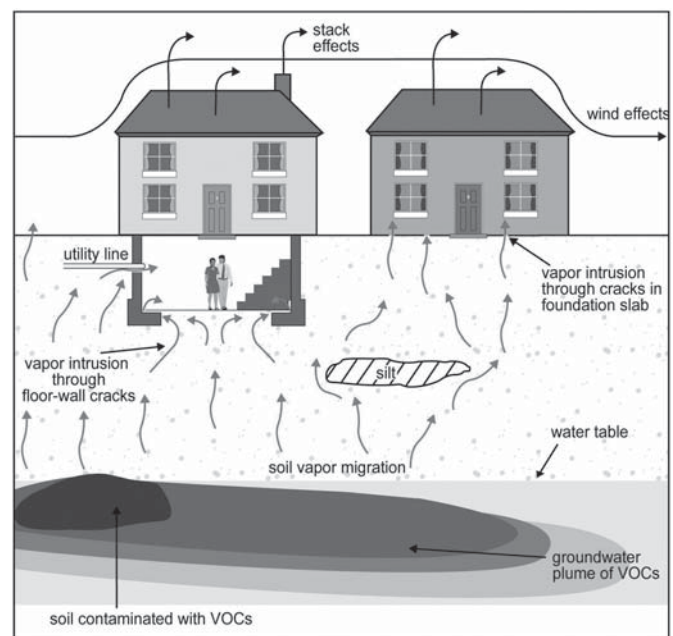
time, knowledge of and experience with assessment and mitigation of vapor intrusion has substantially increased, leading to heightened understanding of and improved approaches for evaluating and managing vapor intrusion. The guides present EPA's current recommendations for identifying, evaluating, and managing vapor intrusion while providing flexible technical approaches to accommodate site-specific conditions and circumstances.

At sites where vapor intrusion poses a potential or actual hazard to occupants' health or safety, exposures usually can be prevented or reduced through relatively simple actions such as changing building pressure and ventilation. In most cases, costs associated with addressing vapor intrusion can be very manageable, resulting in long-term benefits including improved public health and less costly response actions. These benefits are especially likely when actions are undertaken early.

In the document, EPA notes its responsibility to protect individuals from vapor intrusion hazards. The

Agency also notes that for occupational exposure, OSHA's Permissible exposure limits (PELs) are in place but may not be adequate. Further, EPA says the PELs may differ from EPA derivations of toxicity values with respect to weight-of-evidence considerations and use of uncertainty factors. For these and other reasons, EPA does not recommend using OSHA's PELs (or TLVs) for purposes of assessing human health risk posed to workers by the vapor intrusion pathway or supporting final "no-further-action" determinations for vapor intrusion arising in nonresidential buildings. Rather, EPA's recommendations for assessing human health risk posed by vapor intrusion are set forth in the guidance.

To access the documents and more information on vapor intrusion, see <http://www.epa.gov/oswer/vaporintrusion/>. ♦



OSHA updates whistleblower manual to clarify remedies, settlements

OSHA has revised its Whistleblower Investigations Manual to increase uniformity and predictability in the settlement and damages aspects of whistleblower cases.

OSHA has made revisions to Chapter 6 in the manual, "Remedies and Settlement Agreements." The agency



states that the amendments lay out OSHA's guidelines for ordering compensatory and punitive damages, including the factors that OSHA uses for calculating these damages. The chapter affirms that OSHA may award compound interest for out-of-pocket damages,

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such as credit card interest, annuity losses, and job search expenses incurred by a worker as the result of unlawful retaliation by an employer. The revised chapter also clarifies the method OSHA follows to award attorneys' fees under appropriate statutes. ♦

Roofing company owner charged in employee's fatal fall

A Pennsylvania roofing company owner was charged by indictment, unsealed recently, in connection with the fatal fall of an employee, announced United States Attorney Zane David Memeger. The owner is charged with four counts of making false statements, one count of obstruction of justice, and one count of willfully violating an OSHA regulation causing death to an employee.

According to the indictment, the owner failed to provide fall protection equipment to his employees. On June 21, 2013, one of his employees was killed after falling approximately 45 feet from a roof bracket scaffold while performing roofing work. In connection with the OSHA investigation of the fatality, the owner attempted to cover up his failure to provide fall protection by falsely stating, on four occasions, that he had provided fall protection equipment, including safety harnesses, to his

employees. The owner told an OSHA Compliance Safety and Health Officer that his employees had been wearing safety harnesses tied off to an anchor point when he saw them earlier in the day prior to the fall. The indictment alleges that the owner knew that he had not provided fall protection to his employees and none of his employees had safety harnesses or any other form of fall protection. It is further alleged that the owner directed other employees to falsely state that they had fall protection, including safety harnesses, on the day of the fall.

If convicted, the defendant faces a maximum sentence of 25 years in prison, three years of supervised release, \$1.5 million in fines, and a \$510 special assessment.

The case was investigated by the United States Department of Labor, Office of Inspector General Labor Racketeering and Fraud Investigations and the Occupational Safety and Health Administration and is being prosecuted by Assistant United States Attorney Mary Kay Costello.

An Indictment is an accusation. A defendant is presumed innocent unless and until proven guilty. ♦



What does 15 working days really mean?

A recent Occupational Safety and Health Review Commission (OSHRC) ruling is a good reminder to

employers of the importance of contesting actions that they believe to be unfair, particularly when it involves the "15-day working period" that employers are given to contest an OSHA violation.

The Commission held that in counting the 15 working days, employers do not have to



count the day of receipt, nor Saturdays, Sundays, and Federal holidays.

In the case, an employer received an OSHA citation on December 5, 2014. The employer filed its notice of contest on December 30, 2014. OSHA said that the employer missed the "15-working day window" to contest the citation, claiming it expired on Dec. 29, but that the employer could take the issue up with the Commission.

The Commission said that the 15-working days to contest this citation were December 8-12, 15-19, 22-24, 29 and 30, 2014. This excludes all Saturdays and Sundays (December 6, 7, 13, 14, 20, 21, 27 and 28, 2014), as well as the Federal holidays on December 25 and 26, 2014, that were designated by executive order. The company's notice of contest was in fact timely filed on the 15th working day following receipt of the citation. ♦

Temporary staffing company agrees to implement changes to protect employees at all its worksites

A company that supplies temporary employees to businesses has agreed to enhanced workplace safety and health protections for workers it places in all those businesses in a settlement agreement with the U.S. Department of Labor.

OSHA cited the company for a serious violation in December 2014 for not providing hearing tests for its employees exposed to high noise levels while working on assignment at a New Hampshire plant. Under the terms of the agreement, the staffing company will have a qualified safety and health professional review and update a checklist to address foreseeable safety and health concerns at client workplaces. The list will be used to conduct initial and periodic safety and health inspections or audits at client work sites to ensure working

conditions meet OSHA standards.

The company will also provide comprehensive safety and health training for its account executives and sales representatives. The company will develop, with each of its clients, written contracts specifying their respective responsibilities to develop safety and health programs applicable to each workplace where it will supply temporary employees. These terms echo OSHA's recommended practice that temporary staffing agencies and host employers define and implement their respective roles designed to ensure compliance with applicable OSHA standards.

"This is an example of what suppliers of temporary employees should be doing," said Kim Stille, OSHA's regional administrator for New England. "Both host

employers and staffing agencies have critical roles in complying with workplace health and safety requirements. They share responsibility for ensuring worker safety and health. Each employer should consider hazards it can prevent and correct, and no employer—whether a temporary staffing agency or a client company—should ever send an employee into harm's way."

This settlement ripples beyond this one case. It is designed to enhance safety and health for hundreds of the company's employees at numerous work sites in several states. Other suppliers and employers of temporary workers can and should take heed and ensure that all employees work in an environment that enables them to come home each day safe and healthy, according to Labor Department personnel. ♦

Hearing conservation: OSHA's requirements

OSHA's hearing conservation program, at 1910.95, is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes.

Monitoring

The hearing conservation program requires employers to monitor noise exposure levels in a way that accurately identifies employees exposed to noise at or above 85 decibels (dB) averaged over 8 working hours, or an 8-hour time-weighted average (TWA). Employers must monitor all employees whose noise exposure is equivalent to or greater than a noise exposure received in 8 hours where the noise level is constantly 85 dB. The exposure measurement must include all continuous, intermittent, and impulsive noise within an 80 dB to 130 dB range and must be taken during a typical work situation. This requirement is performance-oriented because it allows employers to choose the monitoring method that best suits each individual situation.

Audiometric testing

Audiometric testing monitors an employee's hearing over time. It also provides an opportunity for employers to educate employees about their hearing and the need to protect it.

The employer must establish and maintain an audiometric

testing program. The important elements of the program include baseline audiograms, annual audiograms, training, and followup procedures. Employers must make audiometric testing available at no cost to all employees who are exposed to an action level of 85 dB or above, measured as an 8-hour TWA.

The baseline audiogram is the reference audiogram against which future audiograms are compared. Employers must provide baseline audiograms within 6 months of an employee's first exposure at or above an 8-hour TWA of 85 dB. An exception is allowed when the employer uses a mobile test van for audiograms. In these instances, baseline audiograms must be completed within 1 year after an employee's first exposure to workplace noise at or above a TWA of 85 dB. Employees, however, must be fitted with, issued, and required to wear hearing protectors whenever they are exposed to noise levels above a TWA of 85 dB for any period exceeding 6 months after their first exposure until the baseline audiogram is conducted.

Annual audiogram

Employers must provide annual audiograms within 1 year of the baseline. It is important to test workers' hearing annually to identify deterioration in their hearing ability as early as possible. This enables employers to initiate protective followup measures before hearing loss progresses. Employers must



compare annual audiograms to baseline audiograms to determine whether the audiogram is valid and whether the employee has lost hearing ability or experienced a standard threshold shift (STS). An STS is an average shift in either ear of 10 dB or more at 2,000, 3,000, and 4,000 hertz.

The employer must fit or refit any employee showing an STS with adequate hearing protectors, show the employee how to use them, and require the employee to wear them. Employers

must notify employees within 21 days after the determination that their audiometric test results show an STS. Some employees with an STS may need further testing if the professional determines that their test results are questionable or if they have an ear problem thought to be caused or aggravated by wearing hearing protectors. If the suspected medical problem is not thought to be related to wearing hearing protection, the employer must advise the employee to see a physician. If subsequent audiometric tests show that the STS identified on a previous audiogram is not persistent, employees whose exposure to noise is less than a TWA of 90 dB may stop wearing hearing protectors.

The employer may substitute an annual audiogram for the



original baseline audiogram if the professional supervising the audiometric program determines that the employee's STS is persistent.

Hearing protectors

Employers must provide hearing protectors to all workers exposed to 8-hour TWA noise levels of 85 dB or above. This requirement ensures that employees have access to protectors before they experience any hearing loss.

Employees must wear hearing protectors:

- For any period exceeding 6 months from the time they are first exposed to 8-hour TWA noise levels of 85 dB or above, until they receive their baseline audiograms if these tests are delayed due to mobile test van scheduling;
- If they have incurred standard threshold shifts that demonstrate they are susceptible to noise; and

- If they are exposed to noise over the permissible exposure limit of 90 dB over an 8-hour TWA.

Employers must provide employees with a selection of at least one variety of hearing plug and one variety of hearing muff. Employees should decide, with the help of a person trained to fit hearing protectors, which size and type protector is most suitable for the working environment. The protector selected should be comfortable to wear and offer sufficient protection to prevent hearing loss.

Hearing protectors must adequately reduce the noise level for each employee's work environment. Most employers use the Noise Reduction Rating (NRR) that represents the protector's ability to reduce noise under ideal laboratory conditions. The employer then adjusts the NRR to reflect noise reduction in the actual working environment.

Training

Employers must train employees exposed to TWAs of 85 dB and above at least annually in the effects of noise; the purpose, advantages, and disadvantages of various types of hearing protectors; the selection, fit, and care of protectors; and the purpose and procedures of audiometric testing. The training program may be structured in any format, with different portions conducted by different individuals and at different times, as long as the required topics are covered.

Exposure and testing records

Employers must keep noise exposure measurement records for 2 years and maintain records of audiometric test results for the duration of the affected employee's employment. Audiometric test records must include the employee's name and job classification, date, examiner's name, date of the last acoustic or exhaustive calibration, measurements of the background sound pressure levels in audiometric test rooms, and the employee's most recent noise exposure measurement.

Employers are also required to record work-related hearing loss cases when an employee's hearing test shows a marked decrease in overall hearing. Employers are able to make adjustments for hearing loss caused by aging, seek the advice of a physician or licensed health-care professional to determine if the loss is work-related, and perform additional hearing tests to verify the persistence of the hearing loss. ♦



Eye and face protection standard updated to meet worker needs

An updated edition of the American National Standard for eye and face protection reinforces the emphasis on matching the protector to the hazard, and includes other enhancements to meet the needs of workers and employers.

American National Standard for Occupational and Educational Personal Eye and Face Protection, ANSI/ISEA Z87.1-2015, prescribes the design, performance specifications, and marking of safety eye and face products, including millions of safety goggles, spectacles, faceshields, and welding helmets, worn by workers in thousands of manufacturing and processing facilities, university and research laboratories, and other occupational settings.

It was developed by the Z87 Committee on Safety Eye and Face Protection, which is administered by the International Safety Equipment Association (ISEA), and approved by the American National Standards Institute (ANSI). Safety eyewear conforming to the standard is widely used in the U.S., and the standard is incorporated into OSHA

regulations for personal protective equipment.

Many of the updates in the revision reflect the need to streamline test methods in concert with similar global standards, such as those for impact testing and luminous transmittance for welding protectors, and to recognize new innovations in protector design that had not been previously addressed but which can provide appropriate protection against workplace eye and face hazards.

"The 2015 version reflects a proactive and continued effort to focus on a performance based approach to the standard, versus a design restrictive approach, so that emerging technologies and new hazards can be effectively considered," said J.P. Sankpill, general manager of MCR Safety's U.S. Safety division and chairman of the Z87 Committee.

"By way of example in this revision, the ongoing standard development process also serves to meet end user needs through the acknowledgment of specific configurations such as 'readers' that offer magnification for the wearer."

Several key changes reinforce the importance of selecting equipment based on specific hazards against which protection is needed, a concept first introduced in 2010 as part of the standard's

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reorganization. "Z87 Committee members remain committed to ensuring that the standard includes information that can assist safety professionals and workers in making informed decisions in selecting appropriate eye and face protection," noted Sankpill. "One way to do this is to be familiar with the protector markings and the corresponding performance requirements given in the standard in order to evaluate the capabilities and limitations of a particular device based on the manufacturer's claims."

The standard can be purchased from ISEA for \$60 a copy; discounts are available on bulk orders. For more information, contact Cristine Z. Fargo, ISEA director of member and technical services, cfargo@safetysafetyequipment.org. The "Selection Guide" tool is available for download at www.safetysafetyequipment.org.

About ISEA

Arlington, Va.-based ISEA is the leading trade association for personal protective equipment and technologies. Established in 1933, ISEA supports its member companies in manufacturing and marketing the highest-quality products to protect the safety and health of people who may be exposed to potentially harmful situations while working or at home. For more information visit: www.safetysafetyequipment.org ♦



How must oxygen tank cylinders be “secured”?

OSHA was recently asked to clarify what “secured” meant with regard to 29 CFR 1910.101(b), which requires that the in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks be in accordance with Compressed Gas Association Pamphlet P-1-1965. The Compressed Gas Association Pamphlet P-1-1965, in section 3.2.6., requires that when transporting or unloading a cylinder, use a suitable hand truck, fork



truck, roll platform, or similar device, with the cylinder firmly secured during the transporting/unloading.

Response: OSHA said that “securing” a cylinder is a performance-based measure. The guidelines provided in CGA Pamphlet P-1-1965 and in other more recent versions of the pamphlet describe how care is to be exercised to ensure that cylinders are secure. For a cylinder to be secure, it must not be allowed to drop, nor be transported in a way in



which it could strike another object. Cylinders should never be dragged nor rolled in the horizontal position. There are multiple options to secure and transport a cylinder. A suitable hand truck, forklift truck, cylinder pallet system, or similar material-handling device may be used with the container properly attached to the device, which can protect the cylinder from being damaged by preventing it from being struck by other objects or falling out. Determining whether a cylinder has been secured in accordance with the CGA Pamphlet P-1-1965 would be considered on a case by case basis. ♦

Auto service worker struck after tech mistakes handicapped-accessible accelerator for brake

The Kentucky Fatality Assessment and Control Evaluation (KY FACE) program—funded by the National Institute for Occupational Safety and Health (NIOSH)—investigated a death of a 50-year-old certified master technician who was struck by a car while sitting at a desk in a dealership’s service bay.

An auto technician working in the service bay was preparing a vehicle for an oil change when he mistook a handicapped-accessible accelerator pedal for the brake pedal. The handicapped-accessible pedal,

which can be removed, had a left foot accelerator made for individuals who have lost the ability to use their right foot. Mistaking the accelerator pedal for the brake pedal caused the vehicle to strike the victim from behind and pin him against his desk and a wall causing blunt force injuries. On the way to the hospital, the victim suffered cardiac arrest and died from his injuries.

Recommendations

The KY FACE program investigator evaluated the incident and produced the report “Auto



Technician Mistakes Handicapped Accessible Accelerator Pedal for Brake Pedal and Fatally Pins Co-Worker.”

The report identified two key recommendations to prevent future incidents from occurring:

1. removal of handicapped-accessible equipment prior to operation; and
2. moving office spaces away from car servicing areas. ♦

N95 respirators during pregnancy

NIOSH recently devoted its Science Blog to the topic of N95 filtering facepiece respirator (FFR) usage during pregnancy.

Because many women are employed in occupations that require the use of protective facemasks, such as medical/surgical masks and FFR, NIOSH conducted research into the safety of FFR use while pregnant.

According to NIOSH, some individuals complain of difficulty breathing when wearing an N95 FFR or other protective facemasks, and many pregnant women find that they become somewhat shorter of breath as their pregnancy progresses, causing concern that use of N95 FFRs during pregnancy might make breathing even more difficult and possibly harm the woman and her fetus.

Beyond the issue of use by pregnant working women on the job, the question also has implications for pregnant women outside the workplace. People sometimes use N95 FFRs as a matter of personal choice during infectious disease outbreaks, during environmental disasters that pollute the air, and even in more common recreational activities that may expose them to airborne allergens, such as gardening and woodworking.

Results

NIOSH researchers found no significant differences between the effects of wearing an N95 FFR on pregnant and non-pregnant women

with respect to their heart rate and function, breathing rate, percentage of oxygen and carbon dioxide in their arteries, ear temperature, and blood pressure, as well as their impressions of any warmth or exertion associated with the respirator. There was also no difference in the fetal heart rate with, and without, wearing a respirator.

The NIOSH study shows that the effects of wearing N95 FFRs are mild and not different between pregnant and non-pregnant women. This is probably due to the fact that the filters of modern N95 FFR are able to be made thinner because they have electrically charged fibers that make them more efficient at trapping particles that are in the air, while at the same time being easier to breathe through.

There are other reasons why some individuals may find it harder to breathe when wearing an N95 FFR or medical/surgical mask, such as feelings of anxiety or claustrophobia, an uncomfortable warmth in the region of the face that is covered by the N95 FFR, and a change from normal nose breathing to mouth breathing that may occur. Also, those who have lung problems such as poorly-controlled asthma or chronic bronchitis may find



it difficult to breathe when wearing an N95 FFR.

NIOSH notes that these tests were only carried out for one hour and more studies are needed to find out if there are any additional effects from wearing an N95 FFR for longer periods of time. Any pregnant worker who is required to wear a protective facemask at work should first check with a qualified health professional to determine if any contraindications to wearing it exist.

Summary of key findings

- The effects of wearing an N95 FFR for one hour are similar for healthy pregnant and non-pregnant women.
- Wearing an N95 FFR for one hour by healthy pregnant women does not have an effect on the fetal heart rate.
- Similar effects would be expected with medical/surgical masks. ♦



NIOSH ladder safety app: Over 40,000 downloads

The National Institute for Occupational Safety and Health (NIOSH) is celebrating over 40,000 downloads of its popular extension ladder safety app. The app addresses the major causes of ladder falls by placing a number of interactive and easy-to-use graphic-oriented tools into the hands of the ladder users upon demand.

The app features an angle of inclination indicator which uses visual, sound, and vibration signals making it easier for workers and other users to set an extension ladder at the proper angle of approximately

75.5 degrees. The app also includes a "Selection" tool which provides an interactive and easy-to-use procedure to select the minimum required ladder duty-rating corresponding to the user characteristics and task.

Furthermore, the app features an "Inspection" tool which provides a comprehensive, graphic-based, interactive and easy-to-use checklist for ladder mechanical inspection. OSHA regulations and ANSI A14 standards include a set of rules for safe ladder use – the app's "Proper Use" tool presents these rules in a



clear graphic format, which is both informative and easy to understand.

Using smart phone technology, the NIOSH Ladder Safety app delivers free and easy-to-use ladder safety tools and information, reference materials, and training resources into the hands of individual ladder users wherever and when they are needed. The application is available in English and Spanish as a free download for Apple iPhone/iPad and Google Android devices. ♦

What's wrong with this picture?

Study the photo. What do you see wrong from an OSHA regulatory standpoint? Answers are provided on page 16.



Picture THIS

Answers to what's wrong with this photograph on page 15

1) The ladder is placed in front of doors that open toward the ladder. This is only allowed if the doors are blocked, locked, or guarded. The ladder here could create a hazard for not only someone exiting the room, but also for someone using the ladder. Imagine the fall if the

door hit the side of the ladder. Proper ladder use includes considering what is below and around the work area, such as pedestrian and vehicle traffic. *29 CFR 1910.25 (specifically for wooden ladders)*

2) The eyewash may be blocked by the trash can.

While it's hard to tell from the photograph, someone who had corrosive materials in their eyes, coming from the other side of the trash can, may not see the trash can and stumble over it.

29 CFR 1910.151(c) ♦

Be careful of saying it was the “worker’s fault” when making a report to OSHA

OSHA's top official, Dr. David Michaels, recently updated an advisory group on the progress of OSHA's Severe Injury Reporting Rule change that took effect January 1, 2015.

While Michaels noted that only 35 percent of reports result in on-site inspections, there are some things that will increase the scrutiny. In particular, Michaels said that when employers say an injury was a worker's fault, an inspection will likely take place.

Michaels says that employers blame too many injuries on “careless workers” when the real cause of most incidents in which a worker is hurt is the presence of an unabated hazard, such as failure to provide protective equipment, guards, or adequate training.



“It is far too easy, and often misleading,” Michaels says, “to conclude that carelessness or failure to follow a procedure alone was the cause of an incident.”

To do so fails to discover the underlying or root causes of the incident and, therefore,

fails to identify the systemic changes and measures needed to prevent future incidents.

When a shortcoming is identified, it is important to ask why it existed and why it was not previously addressed.

For example:

- If a procedure or safety rule was not followed, why was the procedure or rule not followed?
- Did production pressures play a role, and, if so, why were production pressures permitted to jeopardize safety?
- Was the procedure out-of-date or safety training inadequate? If so, why had the problem not been previously identified, or, if it had identified, why had it not been addressed? ♦

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DIRECTOR OF EDITORIAL RESOURCES: Paul V. Arnold

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ISSN 1931-7638

GST R123-317687

(42997)



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& Associates, Inc.®

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