

Safety Lines

New residential fall-protection program

By Bob Darling, Safety Investigator Principal

Effective June 16, 2011, Minnesota OSHA (MNOSHA) no longer follows the Interim Fall Protection Compliance Guidelines for Residential Construction and will enforce 29 CFR 1926.501(b)(13). Employers are no longer able to use the alternative fall-protection measures found in the rescinded 1999 Interim Fall Protection Compliance Guidelines for Residential Construction.



The guidelines were rescinded for the following reasons.

- They were never intended to be a permanent resolution.
- Conventional fall-protection is safe and feasible for the vast majority of residential construction activities.
- Federal OSHA received recommendations to rescind the interim directive.
- The residential fall-protection requirements have always been established in Subpart M of 29 CFR 1926.501(b)(13). The new policy directive implements the standard as it was originally intended.

According to U.S. Bureau of Labor Statistics data, fatalities from falls are the leading cause of workplace deaths in construction.

Table 1. Leading causes of construction fatalities – U.S. Bureau of Labor Statistics

Fatalities	2005	2006	2007	2008	2009
Falls	394	433	447	332	277
Struck by	130	120	106	108	79
Electrocutions	107	126	108	89	88
Caught in/between	111	96	98	92	34

Table 2. Fatalities from falls in residential construction – U.S. Bureau of Labor Statistics

Fatalities	2005	2006	2007	2008	2009
Total falls	71	62	55	40	42
Falls from roofs	24	21	19	11	17

Residential fall-protection, continues ►

Effective June 16, 2011, employers must follow 29 CFR 1926.501(b)(13), which states each employee engaged in residential construction activities six feet (1.8 m) or more above lower levels shall be protected by a guardrail system, safety net system or personal fall-arrest system unless another provision in paragraph (b) of this section provides for an alternate fall-protection measure.

Employers using a non-subpart M work method for fall protection, such as scaffolds, ladders or aerial lifts, must comply with the appropriate subparts.



The significant change to the residential fall-protection policy OSHA included in STD 03-11-002 is the interpretation of “residential construction” for the purpose of the standard. To be classified as residential construction, two elements must be met:

- the end use of the structure being built must be as a home, i.e., a dwelling; and
- the structure being built must be constructed using traditional wood frame construction materials and methods.
 - The limited use of steel I-beams to help support wood framing does not disqualify a structure from being residential construction.
 - Cold-formed steel studs will be considered within the bounds of traditional wood frame construction materials and methods.
 - The use of masonry brick or block in exterior walls will be treated within the scope of traditional wood frame construction materials and methods.
 - Methods not considered within the scope of traditional wood frame construction materials and methods include precast concrete and steel I-beams beyond the limited use of beams to support wood framing.

Federal OSHA provides additional residential fall-protection compliance assistance and guidance materials on its Construction Web page at www.osha.gov/doc/residential_fall_protection.html.

New Web tool helps employers with injury, illness recordkeeping

By Brian Zaidman, Research and Statistics

The U.S. Department of Labor has created a new Web tool, the OSHA Recordkeeping Advisor (www.dol.gov/elaws/OSHARecordkeeping.htm), to help employers understand their responsibilities to report and record work-related injuries and illnesses.

elaws® - OSHA Recordkeeping Advisor

The tool is written in plain language to help employers, especially small-business employers, understand OSHA's recordkeeping requirements. It asks a series of questions to help employers quickly determine whether an injury or illness is work-related, whether a work-related injury or illness needs to be recorded and which provisions of the regulations apply when recording a work-related injury or illness. Links to the regulations are provided throughout the advisor. It is not, however, a substitute for compliance with OSHA's recordkeeping regulations.

For additional recordkeeping assistance, visit the MNOSHA recordkeeping Web page, which includes the Recordkeeping 101 and 201 series, at www.dli.mn.gov/OSHA/Recordkeeping.asp and the federal recordkeeping website at www.osha.gov/recordkeeping.

Excavation fatality underscores trenching dangers

By Gary Robertson, Training Officer

On a chilly Minnesota spring morning, the excavation crew of a small, family owned company arrived on a residential site for the final day of digging before the installation of a new water line. The company had been in business for about 17 years.

The crew was digging an L-shaped trench between a house and a metal pole building, with the top of the L at the house and the bottom right of the L butting up to the pole building. The entire trench was about seven to 10 feet deep; it varied in widths of four to eight feet at the top and about two to four feet at the bottom. Due to frost, the soil next to the pole building was difficult to excavate, so the excavation in this area was dug only one backhoe-bucket wide.

The backhoe was operated by the company owner, who was considered the competent person on site. He got down in the trench near the pole building and was just finishing the installation when a large section of the south wall collapsed on him, crushing him against the north wall of the trench. Two other employees were standing at the top of the trench and saw the wall collapse. One employee got into the backhoe and was able to remove some of the soil, down to the victim's waist. The other employee left to contact emergency services.

When help arrived, the victim was still pinned against the wall, up to his waist. The emergency personnel freed the victim using shovels and lifted him out of the trench. They placed him on a stretcher and moved him inside of the pole building. But the victim died shortly after an ambulance arrived.

The part of the dirt wall that caved-in was approximately four feet wide by four feet long, and seven feet deep – about 4.15 cubic yards; one cubic yard of dirt weighs 2,700 pounds, about the weight of a pick-up truck.

Horrific accidents such as these often happen because workers don't see the danger. They may think the trench looks safe and the work has been done this way for years with no problems, plus they are only going to be in the trench for a minimum amount of time.

Minnesota OSHA (MNOSHA) investigators rarely hear that a company did not know what needed to be done to make the trench safe. Most excavation companies, whether large or small, know what needs to be done to keep excavation workers safe. Even with the dual pressures of time and money, proper safety precautions must be put in place on every jobsite.

In this case: the soil was C soil, the trench was more than five feet deep, no required adequate protection systems were used and the two surviving employees implied the owner believed the one-and-a-half feet of frost would help make a seven-foot-deep vertical wall of dirt safe, keeping it from collapsing.

MNOSHA Compliance, MNOSHA Workplace Safety Consultation and many other safety organizations have been teaching and enforcing these trenching safety requirements for about 40 years. Further information about trenching and excavation is on the federal OSHA website at www.osha.gov/SLTC/trenchingexcavation.

NOTHING CAN BE MORE DECEPTIVE TO THE EYE THAN THE HARMLESS APPEARANCE OF A DEEP TRENCH.

– J.L. Mickle
The Mechanics of a Trench Cave-in

New effort to keep workers safe from heat stress

By Diane Amell, Training Officer

Federal OSHA and those states that administer an OSHA state-plan have undertaken the “Campaign to prevent heat illness in outdoor workers,” an outreach program that closely follows a successful effort by California OSHA (Cal/OSHA) to reduce heat illnesses and fatalities among farm workers. The campaign slogan is: “Water. Rest. Shade. The work can’t get done without them.”

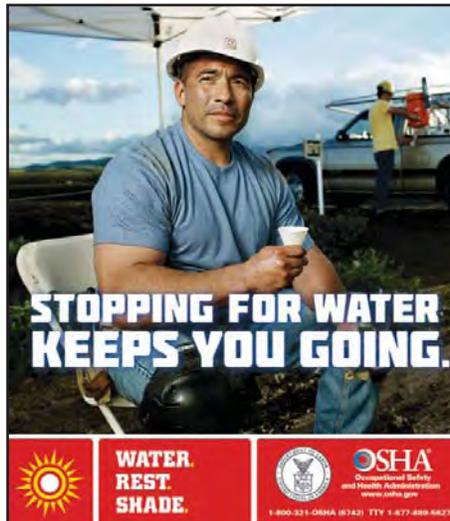
Cal/OSHA, in cooperation with the Labor Occupational Health Program at the University of California – Berkeley, developed a series of training materials, including posters, fact sheets and a lesson plan, which federal OSHA modified for use around the country. These materials are available in both Spanish and English.

The posters and fact sheets primarily consist of pictures, with limited text for those employees with low literacy. They are mainly directed at agricultural and construction workers, although other employees with heat exposure can benefit from them as well.

To beat the heat, OSHA offers the following tips.

- Drink water often. Six ounces every 15 to 20 minutes is recommended.
- Rest in the shade.
- Report heat symptoms to one’s supervisor early. Don’t wait.
- Know what to do in an emergency. Heat stroke is a medical emergency that can be fatal. Heat exhaustion victims should be taken to a clinic or emergency room for evaluation.

- Train employees about the danger of heat stress, the symptoms of heat-related illness and the measures to take to protect themselves and others.
- Acclimatize workers gradually over a five-day period. Be aware they may need to be re-acclimatized after a one week absence.
- Keep in mind that some personal protective equipment, such as Tyvek® suits, can increase the risk of heat stress.



Outdoor workers are not the only ones at risk. Employees who work in places such as foundries, bakeries, and commercial kitchens and laundries could be at risk year-round.

Minnesota OSHA enforces a heat-stress standard; based on the American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV), it applies to indoor

workrooms in general industry only. All employees who are exposed to heat stress must be trained under Minnesota Rules 5205.0700 subp. 3, the Employee Right-To-Know training program for harmful physical agents, or 29 CFR 1926.21(b), Safety training and education for construction.

For more information, visit the federal heat campaign Web

page at www.osha.gov/SLTC/heatillness.

Minnesota OSHA has developed both a heat-stress booklet and a Hazard Alert, which are available at www.dli.mn.gov/OSHA/Information.asp.



Injuries due to assaults tend to grab our attention, in part because they are relatively uncommon in Minnesota (only 2 percent of the cases with days away from work in 2009). An examination of the characteristics of cases caused by assaults and violent acts shows that some of the characteristics have changed in recent years, and that assaults result in a wide range of injuries.

For privately owned establishments, there were 1,120 assault cases that occurred from 2004 through 2006, resulting in one or more days away from work, and there were 1,420 cases from 2007 through 2009. Here are some comparisons of these two three-year periods to illustrate the evolving nature of these cases.



- Females accounted for 48 percent of the cases from 2004 to 2006, and increased to 70 percent of the cases from 2007 to 2009.
- The health care industry had the highest percentage of cases, accounting for approximately 31 percent of the cases from 2004 to 2006 and for 44 percent of the cases from 2007 to 2009. These workers were assaulted by health care patients. No other industry consistently had reportable cases.
- The median duration away from work (not including the day of the assault) decreased from seven days during the 2004 to 2006 period to four days during 2007 to 2009.
- The most common type of injury resulting from assaults was sprains and strains, with 24 percent of the cases in 2004 to 2006 and 35 percent of the cases in 2007 to 2009. No other injury type accounted for more than 10 percent of the cases. During the entire 2004 to 2009 period, sprains and strains accounted for 41 percent of all the cases with days away from work.
- The most commonly injured body parts were the back and upper extremities, accounting for approximately half the cases in each three-year period.

LogSafe program, coordinator credited for assisting Mn/DOT award recipient



Ed LaFavor, MNOSHA Workplace Safety Consultation, was credited recently by the Minnesota Department of Transportation (Mn/DOT) for providing LogSafe training to RH Grover Tree Service, which enabled the contractor to earn a Mn/DOT WorkZone Safety Award for its safe and skillful work clearing trees and brush along Hwy. 61, northeast of Duluth, Minn. LaFavor is third from the left in the photo of RH Grover Tree Service accepting its award.

• Learn more about the LogSafe program at www.dli.mn.gov/Wsc/Logging.asp. •

Personal protective equipment

Online tools can make learning about a serious subject fun

By Diane Amell, Training Officer



Employers looking for a new way to underscore the importance of personal protective equipment (PPE) can access a couple of online games to make the training a bit more fun. They can be fun for kids as well, teaching PPE safety to the younger set.

Get Clobbered! The Scientist Safety Game

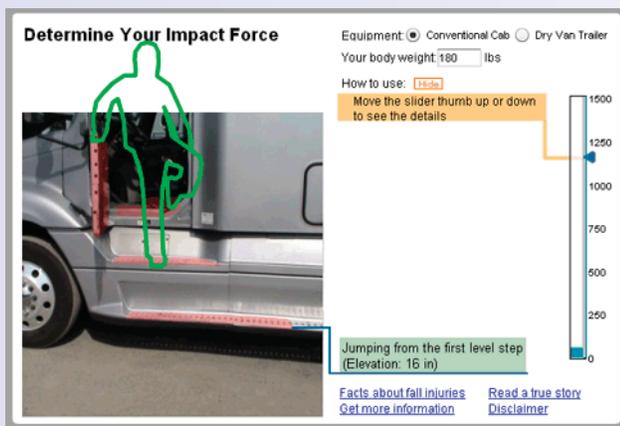
This game, on the Planet Science website at www.planet-science.com/categories/under-11s/games/2010/09/fashionable-labs.aspx, runs each “scientist” through a series of hazards, where they then must quickly select the proper PPE to protect against the specific hazard coming down the conveyor belt. Look out – the scientist could “get clobbered” if the wrong PPE is selected.



Keep Trucking Safe

This resource from the Trucking Injury Reduction Emphasis (TIRES) program features two simulation training tools: *Environment*, at www.keeptrucking-safe.org/game_2.html; and *Determine your impact force*, at www.keeptruckingsafe.org/game.html.

Environment lets users test their skills in preventing slips, trips and falls by changing the footwear (e.g., safety boots, high heels), task (e.g., walking, pushing a handcart) and surface conditions (e.g., icy, wet, oily) for a trucker who is walking. A friction meter on the right side measures the amount of surface friction needed to walk safely and the amount produced by each grouping. Watch out – the wrong set of conditions can result in the trucker slipping and falling.



Determine your impact force illustrates the forces generated on the ankles, knees, hips and back when exiting a truck cab or trailer of a large truck. Users can choose how the trucker exits the truck or trailer to see the various impact forces and have the option to set the trucker’s weight.

The website, created by the Safety and Health Assessment and Research for Prevention (SHARP) Program at the Washington Department of Labor & Industries, also contains posters and other written materials to assist trucking industry employers and employees in staying safe on the job.

Role in Minnesota Safety and Health Conference deemed a success

By Diane Amell, Training Officer

Minnesota OSHA (MNOSHA) took part in the 77th annual Minnesota Safety Council conference, May 11 through 13, at the Minneapolis Convention Center.

Several Minnesota OSHA Compliance employees made presentations during the opening day of the conference:

- new federal crane standard (half-day session), presented by State Programs Administrator Director Tyrone Taylor;
- annual MNOSHA update, presented by MNOSHA Compliance Administrative Director James Krueger; and
- hexavalent chromium (breakout session), presented by Senior Industrial Hygienist Ron Anderson.

MNOSHA also hosted its traditional “Lunch with the Enforcers” during the first day.

During the second day of the conference, MNOSHA Workplace Safety Consultation (WSC) Ergonomics Program Coordinator Breca Tschida was a panelist for an ergonomics roundtable discussion. WSC Safety Investigator Ben Bloom gave a combustible-dust presentation during a breakout session.

The 77th Annual Governor’s Safety Awards Luncheon took place on the final day of the conference, with WSC Director Patricia Todd and her staff lending their assistance.

Both MNOSHA Compliance and MNOSHA Workplace Safety Consultation each hosted an informational booth during the first two days of the conference.

The Minnesota Safety Council’s 78th Annual Safety and Health Conference is scheduled to be May 9 through 11, 2012.



DLI Commissioner Ken Peterson



Minnesota Safety Council President Carol Bufton



osha frequently asked questions *answers*

As part of its continual effort to improve customer service and provide needed information to employers and employees, Minnesota OSHA (MNOSHA) answers the most frequently asked questions from the previous quarter.

Q What is the Globally Harmonized System and how does it compare to Employee Right-To-Know?

A The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) is an international effort to standardize labeling and material safety data sheets (MSDSs). The system provides a universal and consistent method for evaluating the health, physical and environment hazards of a hazardous substance, classifying a substance based on its identified hazards and communicating the hazards to employers, employees and others through labels and safety data sheets.

GHS requires that manufacturers use standardized formats for safety data sheets and labels. Data sheets must contain the following information, *in order*.

- Identification of the substance
- Hazard identification
- Composition/information about ingredients
- First aid measures
- Firefighting measures
- Accidental release measures
- Handling and storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information
- Other information



By contrast, Minnesota's Employee Right-To-Know standard (Minnesota Rules Chapter 5206) requires the MSDS contain the following information.

- The name or names of the substance
- The permissible exposure limit (PEL) or, if none exists, any recommended limits found in consensus standard(s)
- Primary routes of employee exposure
- Known symptoms of exposure

- Flammability, explosion or reactivity hazards
- Appropriate emergency treatment
- Proper conditions for use of and exposure to the substance
- Cleanup of leaks and spills
- Manufacturer's name, phone number and address

On Sept. 30, 2009, federal OSHA published a proposed rule incorporating the GHS into the 29 CFR 1910.1200 Hazard Communication standard. Should this become a final rule, Minnesota OSHA will have six months to either incorporate it into Minnesota Rules 5206 Employee Right-To-Know or to adopt GHS as a separate standard.

For more information about the GHS, visit the federal OSHA Globally Harmonized System for Hazard Communication topics page at www.osha.gov/dsg/hazcom/global.html.

Q My workplace was recently inspected by OSHA. How was it selected?

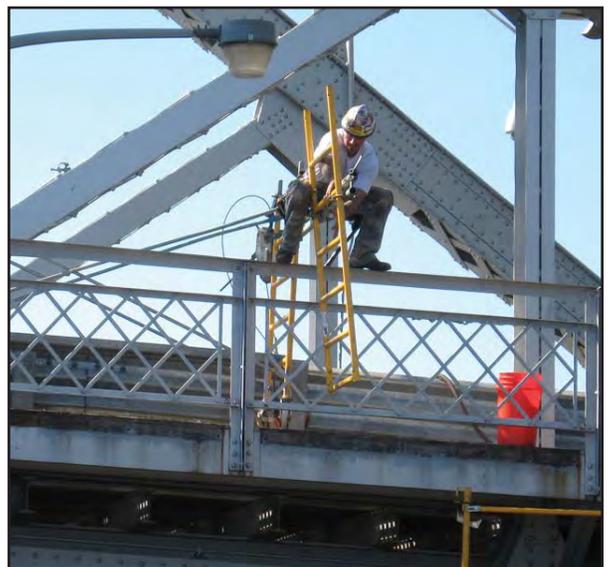
A Minnesota OSHA schedules inspections based on the following.

- A report of *imminent danger*. An imminent danger is a condition or practice in a place of employment that presents a substantial probability that death or a serious injury or illness could occur within a short time if it is not eliminated.
- A fatality or a catastrophe. A catastrophe is defined as the hospitalization of three or more employees resulting from an employment accident or illness caused by a workplace hazard.
- A complaint filed by a current employee or a representative of employees, such as a union steward.
- A referral from another government agency, a physician or the media.
- A programmed or routine inspection.
- A follow-up to a previous inspection.

For more information about inspection scheduling or the inspection process, see the *Minnesota OSHA Workplace Inspections* booklet at www.dli.mn.gov/OSHA/PDF/inspectionbooklet.pdf.

If you have a question, contact Minnesota OSHA at (651) 284-5050 or osha.compliance@state.mn.us. We may feature your question here.

Don't miss MNOSHA's newest 'best of the worst' photos



When they are out in the field, Minnesota OSHA inspectors are always on the lookout for hazardous work practices. Some of the techniques they capture on camera have to be seen to be believed.

View the new "Best of the worst" slideshow at www.dli.mn.gov/OSHA/BestofWorst.asp.

Minnesota's newest **MNSTAR** worksite

The Pioneer Hi-Bred Jackson soybean production facility, of Jackson, Minn., was recognized June 21 by safety and health representatives from the Minnesota Department of Labor and Industry for its achievement as a Minnesota Star (MNSTAR) worksite. Pioneer Hi-Bred is a DuPont business.

MNSTAR is a Minnesota Occupational Safety and Health Administration program that recognizes worksites where managers and employees work together to develop safety and health management systems that go beyond basic compliance with all applicable OSHA standards and result in immediate and long-term prevention of job-related injuries and illnesses.

Learn more about the MNSTAR Program online at www.dli.mn.gov/Wsc/Mnstar.asp.



Updated fatality, serious-injury investigation information online

Updated information about serious-injury incident investigations and fatal incident investigations completed by Minnesota OSHA during 2006 through 2010 is available online. The information details the incident type, provides the number of incidents each year and shows the percentage occurring in the construction industry and in general industry.

- Visit www.dli.mn.gov/OSHA/Information.asp and click the links in the "Injury/fatality" row. •

Minnesota's newest **MNSHARP** worksite



Water Heater Innovations, Inc., of Eagan, Minn., was recognized May 17 by the Minnesota Department of Labor and Industry for its achievement as a Minnesota Safety and Health Achievement Recognition Program (MNSHARP) worksite.

MNSHARP is a Minnesota Occupational Safety and Health Administration program that recognizes organizations where managers and employees work together to develop safety and health programs that go beyond basic compliance with all applicable OSHA standards and result in immediate and long-term prevention of job-related injuries and illnesses.

Learn more about MNSHARP online at www.dli.mn.gov/Wsc/Mnsharp.asp.