



## Oregon OSHA emphasizes trenching safety

By Jani Johnston,  
Executive Assistant, Oregon OSHA

Oregon experienced four trench cave-ins during the past few months. By sheer luck, none of these accidents resulted in a fatality.

Because of the cave-ins, all of which have the potential to cause serious injury or death, Oregon OSHA recently sent letters to companies that may be trenching to notify them that its focusing its enforcement efforts on Oregon trenching and excavation activities.

The requirements for preventing trenches and excavations from caving in on workers are not new. Oregon OSHA adopted Federal OSHA's Excavation and Trenching Standard in 1974. The standard was last updated in September 1990.

The standard applies to all open excavations made in the earth's surface, including trenches. As defined in the standard, a trench is a narrow excavation below the ground's surface, in which the depth is greater than the width, the width not exceeding 15 feet. An excavation is any man made cut, cavity, trench, or depression in the

earth's surface formed by earth removal. This can include excavations for anything from cellars to highways.

Consider that the earth removed from the ground to form a trench or cavity is extremely heavy; possibly weighing more than 100 pounds per cubic foot. A cubic yard of soil, which contains 27 cubic feet of material, may weigh more than 2,700 pounds. That's nearly one and a half tons, equivalent to the weight of a car, in a space less than the size of an office desk. The human body cannot support this much weight without injury.

### Accidents are costly

Accidents that occur because safety precautions are absent are costly. In addition to the loss of human life, the costs of a trenching accident can include: work stoppage to rescue the victim, time and labor to reexcavate the collapsed trench, workers' compensation costs and increased insurance premiums, and additional

See "Trenching," page 2

## Hazardous energy, lockout/tagout, and the working person

By Ellis Brasch,  
Management Analyst, Oregon OSHA

Do you maintain machines or equipment? Do you use machines or equipment that are periodically shut down for service or maintenance? Are you accountable for the safety and health of workers who do these tasks? If you answer "yes" to any of these questions, you're probably familiar with the words "hazardous energy" and "lockout/tagout." But do you have sufficient lockout/tagout training and knowledge so that you, your co-workers, or the workers you manage are protected from hazardous energy?

See "Lockout," page 4

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paperwork resulting from the accident investigation. There’s also the possibility of monetary penalties for violation of safety standards.

For example, after the death of a worker in a trench cave-in, an Oregon contractor was cited for inadequate training, using defective equipment, and inadequate supervision, along with other violations. The Workers’ Compensation Board issued an opinion and order affirming eight out of 10 of the willful and serious violations. The penalties totaled \$356,430. (See Safety Note, page 9.)

**Planning for safety**

Many on-the-job accidents result from inadequate planning. Correcting mistakes in shoring or sloping after work has begun slows the operation, adds to costs, and

increases the possibility of a cave-in.

Contractors must build safety into pre-bid planning. Developing safety checklists specific to each job will help accomplish this. Checklists should include items covered by any applicable Oregon OSHA standards, job site information, and other information necessary for safe operations. The following specific site conditions should be considered before preparing a bid: traffic; nearness of structures and their conditions; soil; surface and groundwater; the water table; overhead and underground utilities; and weather. These and other conditions can be determined by job site studies, observations, test borings for soil type or conditions, and consultations with local officials and utility companies.

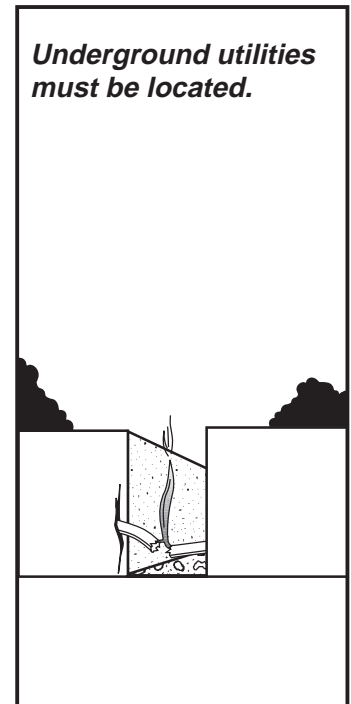
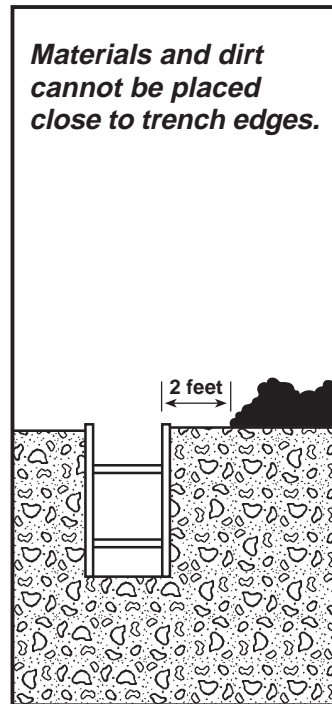
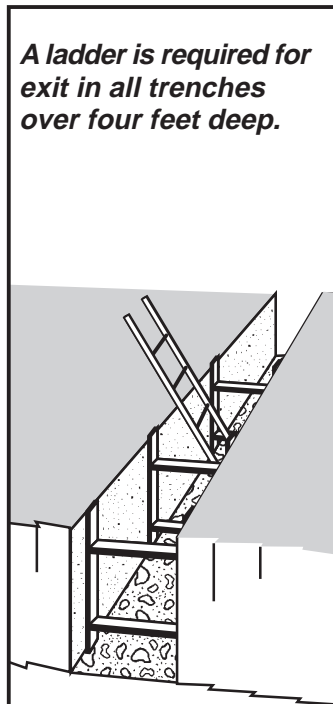
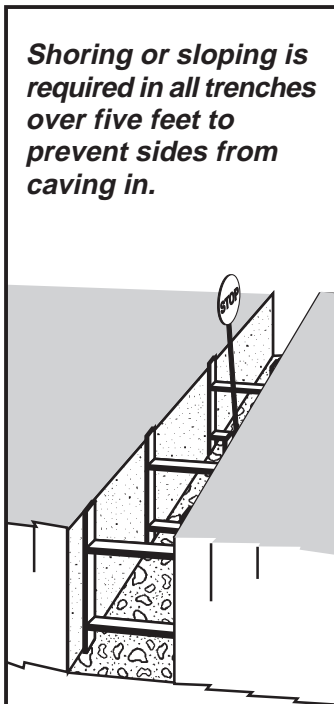
**Summary**

Trenching and excavation work presents serious risks to all workers involved. The greatest risk is cave-ins. Moreover, when they occur, cave-ins are more likely to result in worker fatalities than other excavation-related accidents. Strict compliance with all sections of the standard will prevent or greatly reduce the risk of cave-ins as well as other excavation-related accidents. ■

The full text of the rules adopted by Oregon OSHA may be found in OAR 437, Division 3, Subdivision P, Excavations. To receive a free copy of these rules, call the Oregon OSHA Resource Center at (503) 378-3272.

A workshop on this subject is offered through the Education Section which can be reached at the same number.

**Oregon OSHA trenching and excavation rules**



**To locate underground utilities, telephone the Oregon Utility Notification Center, 1-800-323-2344, 48 hours before you dig.**

# Administrator's Message



Peter De Luca

June is National Safety Month – 30 days set aside by the National Safety Council to focus on safety. It also marks the beginning of a new summer construction season. In Oregon we typically see lots of accidents in the summer months – accidents in logging, accidents in agriculture, accidents in construction, and accidents on the highway.

Why are there so many accidents?

I believe that many times it is because we hurry, because we cut corners, because we are thinking about other things, because we are more concerned with production than we are with safety.

Summer in Oregon is a wonderful time. The weather is good. Children are out of school. Oregonians work hard and fast so they can fit in some vacation days here and there. Work and play are in full swing. But summer can also be a deadly time. More workplace accidents occur during the summer months than at any other time of the year. In 1997 82 workers died in Oregon workplaces. Of those, 43 were accepted Oregon Workers' Compensation fatality claims, 16 of which occurred in the months of July, August and September. Eleven of the 43 fatalities were in the construction industry, with six occurring in the summer months.

National Safety Month is a time to reflect on the importance of safety. It is a time to remember how precious our lives and our health are. It is a time to recommit ourselves to making Oregon's workplaces safe and healthful. It is a time to reexamine our safe work practices and to be sure that we continue to put safety first.

Employers and employees alike should think about safety during National Safety Month. Buckle up. Lock out and tag out. Use your fall protection or personal protective equipment appropriately. If you aren't sure what the rules are, find out. Call Oregon OSHA to schedule a comprehensive consultation. If we all commit to working safely, we truly can save lives, maybe even our own! ■

## Article Submissions...

*Resource* welcomes submissions of articles for publication. If you'd like to share information about OSHA-related topics, announcements, or events, please send them to Jani Johnston, OR-OSHA, 350 Winter St. NE, Salem, OR 97310-0220 or e-mail them to her, [jani.k.johnston@state.or.us](mailto:jani.k.johnston@state.or.us).

Articles will be used according to their relevance, timeliness, compatibility with OR-OSHA policy and practice and the availability of space. Because *Resource* is a quarterly publication (winter, spring, summer, fall), please time your submission so that we receive it about six months

before publication. Please submit articles on diskette in a PC-compatible format such as WordPerfect. Or, you may e-mail your article to the address above.

Please include your name (as you would like it to appear in a byline) if the article is one you wrote, a phone number (in case we have questions), and a few lines describing you, your job, credentials, or interest in the subject (again, if the article is written by you or is an opinion piece). The *Resource* staff retains the right to edit all submissions for style and length. ■

## RESOURCE

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Information requests should be directed to:  
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## What is hazardous energy?

Energy is the capacity for doing work. It’s present in many forms (the most common of which are listed in the table below). All forms of energy are associated with motion. Moving objects have kinetic energy. Tensioned objects, such as coiled springs, have the potential for motion – potential energy. In the workplace, energy becomes hazardous when it’s not controlled and when it’s released in quantities that could harm a worker. Here’s a short list of energy types that, if not controlled, could be hazardous:

<b>Form of Energy</b>	
<b>Potential</b>	Stored energy that can be drawn upon to do work. Suspended loads, compressed springs, and accumulator pressures are examples. Potential energy can be converted to kinetic energy and many of the other energy forms below.
<b>Kinetic</b>	Energy resulting from moving objects such as released loads and uncoiling springs. When these objects are released, their potential energy is converted to kinetic energy.
<b>Flammable</b>	Energy converted from the combustion of gasses, liquids, solid chemical, and vapors.
<b>Chemical</b>	The capacity of a substance to do work or produce heat through a change in its composition. Chemical energy can be converted from gasses, liquids, solid chemicals, and vapors.
<b>Electrical</b>	Energy generated through the conversion of other forms such as mechanical, thermal, or chemical energy. Energy stored between plates of a charged capacitor is an example of electrical potential energy. Typical electrical energy sources include open bus work, motors, and generators.
<b>Heat</b>	Energy transferred from one body to another as the result of a difference in temperature. Heat flows from the hotter body to the colder. Sources include steam, liquids, and gasses.
<b>Radiation</b>	A flow of atomic and subatomic particles and waves such as heat rays, light rays, and X-rays. Common industrial sources include X-ray systems and lasers.

You should know what hazardous energy is and some of the different forms it can take but, more important, you should know:

- what will happen if energy is released and
- how to control energy so that it does not harm you or another worker

## What is lockout/tagout?

Lockout/tagout refers to Oregon OSHA’s requirements for protecting workers from hazardous energy when they do service or maintenance work on machines or equipment. You’ll find most, but not all, lockout/tagout requirements in the lockout/tagout standard: 1910.147, The Control of Hazardous Energy.

This standard applies to all Oregon employers with workers who service or maintain machines or equipment, including agriculture, construction, and logging operations.

“Lockout” means locking the mechanism that isolates an energy source from a worker. When the mechanism of an energy-isolating device is locked, it allows a worker to safely service or maintain potentially hazardous equipment. A lockout device secures the energy-isolating device in a safe position. Each lock must have its own unique key or combination. When an energy-isolating device is locked out, the equipment it controls will not work until the lock is removed.

“Tagout” means placing a warning tag or sign – a tagout device – on an energy-isolating device. Tagout devices must control hazardous energy at least as effectively as lockout devices. But, because tagout devices don’t provide the same physical barrier to hazardous energy as lockout devices, it may be difficult to demonstrate that they are equally effective. Opening an extra disconnect or removing a valve handle are examples of ways to protect workers from hazardous energy when they service or maintain tagged out equipment. The tag must be securely fastened to the energy-isolating device and must state that the equipment being serviced or maintained can’t be operated until the tag is removed

See “Lockout,” page 5

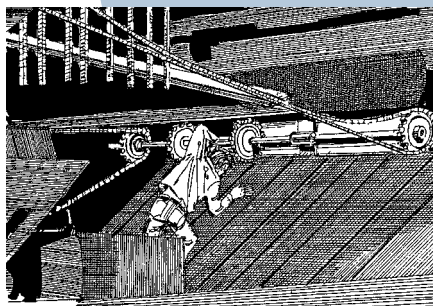
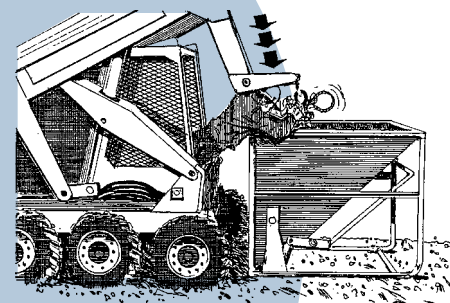
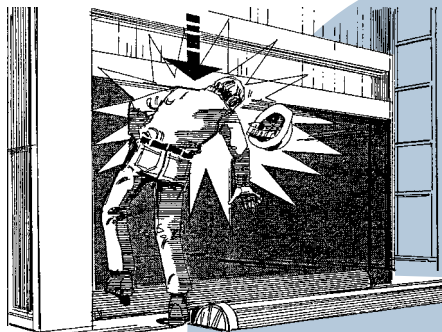
*“Lockout,” from page 4*

Lockout/tagout procedures range from simple to complex. On the simple side of the spectrum are procedures for one worker on a single shift who services or maintains just one piece of equipment that has one energy source to lock out; the most complex procedures apply when workers on different shifts must service or maintain equipment with many hazardous energy sources.

The lockout/tagout concept is a relatively simple one – control hazardous energy so workers don’t get hurt when they service or maintain equipment. However, applying the concept to a complex production operation may not be so straightforward.

Oregon OSHA recently published a guidebook to help answer your questions about lockout, tagout, and the control of hazardous energy. This easy-to-read guide is based on workers’ frequently asked lockout/tagout questions; it highlights key terms, concepts, and safety tips. For more information on the guide see Spotlight in this issue. ■

*All it takes for an accident is one person who mistakenly assumes the power is off.*



### Hot off the press: **LOCKOUT & TAGOUT**

*Oregon OSHA’s Guide to Controlling Hazardous Energy* was created to help you answer questions about lockout, tagout, and the control of hazardous energy. It’s organized in a question-and-answer format based on workers’ and employers’ frequently asked questions. Throughout the booklet key terms, concepts, and important safety tips are highlighted.

For a free copy of this valuable publication, call the OR-OSHA Resource Center, (503) 947-7447 or 1-800-922-2689 (both numbers are V/TTY) or fax your request to (503) 947-7463. There may be charges for additional copies. ■

### Publication Spotlight



# Attention: new respiratory protection standard to take effect

## Do you know how the revised standard will impact you?

Because the proposed effective date of OR-OSHA's revised Respiratory Protection Standard (1910.134) is July 1, 1998, OR-OSHA has a plan to keep you up-to-date. On June 10, OR-OSHA is teaming up with Oregon ED-NET to broadcast a three-hour training session covering the changes in the standard. For a complete list of ED-NET sites or more information, contact Virginia Yonkers, OR-OSHA Education Section, (503) 947-7437. Use the registration form below and fax or mail it to the Education Section.

The new standard contains major changes that will affect employers and their workers. Some of those changes are:

- Significant additions to worksite-specific written programs
- Specific fit-testing protocols
- Guidelines outlining voluntary or non-required use of respirators, including training, medical evaluation of fitness, fit-testing, and a program to ensure proper cleaning, storage, and maintenance of respirators
- Medical evaluation and appointment of a physician or other licensed health-care professional
- Assignment of a qualified, trained respirator program administrator



## Why are there so many changes?

The numbers are breathtaking! More than five million American workers wear respirators in an estimated 1.3 million workplaces every day. And yet every year more than 66,500 workers suffer severe exposure to airborne contaminants, physical hazards, or biological agents. These exposures can lead to loss of vision, lung damage, cancer, heart disease, asbestosis, and other chronic illnesses. Tragically, many of these health challenges could have been avoided through proper training and use of respiratory protection. ■

## REGISTRATION FORM

Name \_\_\_\_\_

Company \_\_\_\_\_

Mailing address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

I plan to attend the class at \_\_\_\_\_  
(EDNET Location)

**For Registration mail or fax to:** Oregon OSHA  
Training Section - Attn: Virginia  
350 Winter St. NE Room 430  
Salem OR 97310

Fax: (503) 947-7462

For Information Phone:  
(503) 947-7437

**Classes fill fast, register early!**

# SAFETY NOTES

Department of Consumer & Business Services  
Oregon Occupational Safety & Health Division  
Salem, OR 97310

## Fatality Report

### Accident Summary

Accident type .....Crushing

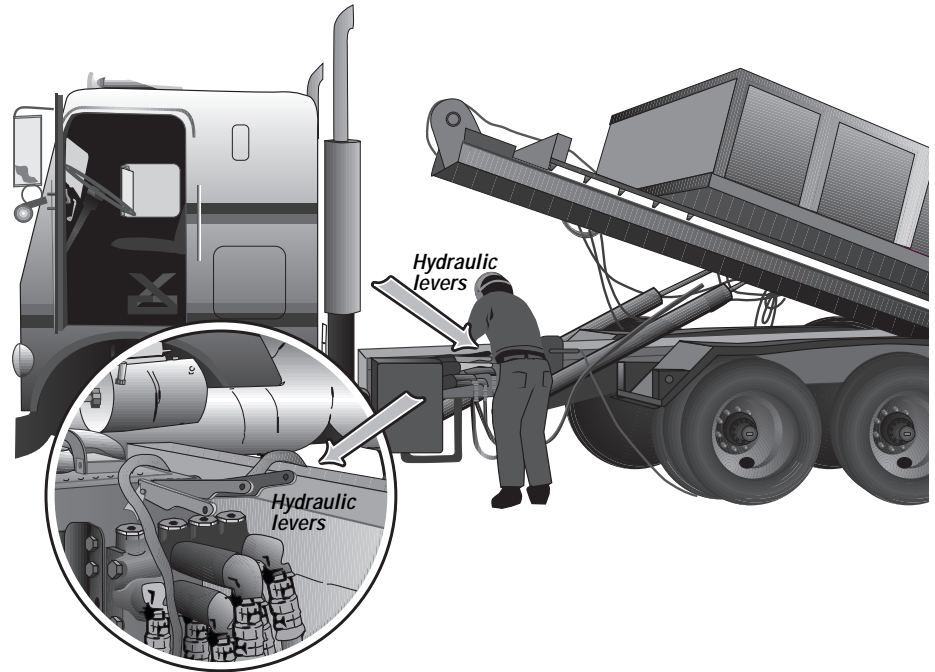
Industry .....Scrap metal recycling

Employee job title ..... Yard foreman

### Description of fatal accident

At the time of the accident, the victim, yard foreman for a scrap metal recycling business, was welding a piece of flatbar onto the driver's-side chassis rail of a truck belonging to the recycling business. The truck was used to haul a drop box for scrap metal and was equipped with a hydraulic tilt-bed. The victim had raised the tilt-bed so that he could weld on the inside section of the truck chassis rail. The hydraulic controls for the tilt-bed were near the victim. As the yard foreman leaned over the truck rail welding, his upper torso made contact with the hydraulic levers. The hydraulic tilt-bed came down on him, pinning him between the truck chassis rail framework and the tilt-bed framework.

The victim's scream alerted an employee working on the front of the truck. He found the victim pinned and yelled for assistance. Other employees ran to the site, and one of them ran to the office and notified the staff to call for emergency assistance. The yard foreman was dead when the emergency crew arrived.



### Accident findings

Investigation revealed that the tilt-bed framework, an asset of the business when it had been purchased, was not equipped with a stiff leg that would prevent the tilt-bed from returning to the bed when it was in a raised position. Nor had the tilt-bed been blocked or cribbed during the welding procedure. During inspection, no hydraulic fluid was found, indicating that the hydraulic system did not fail, causing the tilt-bed to come down.

Investigators believe that during the course of his welding, the victim moved the controls for the hydraulic tilt-bed, causing it to come down.

Under OAR 437-002-0223 (19)(f), it was the employer's responsibility to ensure that the truck was properly equipped with a means to prevent the tilt-bed from returning to its lowered position during maintenance and repairs.

# SAFETY NOTES

Department of Consumer & Business Services  
Oregon Occupational Safety & Health Division  
Salem, OR 97310

## Fatality Report

### Accident Summary

Accident type ..... Run over by top loader  
Industry ..... Marine cargo  
Employee job title ..... Longshoreman

### Description of fatal accident

The victim worked as a longshoreman, and at the time of this accident, was returning from lunch break with his work partner to continue lashing containers on the ship “Hanjin Bremen.” While the two were headed for the container staging area, a top loader operator drove his vehicle between two container trucks parked in the area, and attempted to cut across a designated walkway. While the driver looked to the right, the front left of his top loader struck the victim from behind. The victim’s partner took off his hard hat and threw it at the windshield of the top loader to get the driver’s attention. Although he succeeded in getting the driver’s attention, the front left tire of vehicle was already on the victim. When emergency personnel arrived, the longshoreman was pronounced dead because of injuries to his lower torso.

The accident occurred as lunch break ended, when many vehicles — including top loaders, forklifts, trucks, pickups, and others — and employees were hurrying back to their jobs in an area busy with a variety of vehicles and containers, some of which were in pedestrian zones.



### Accident findings

It was established that the victim was not wearing a high-visibility vest — a piece of personal protective equipment (PPE) which may have saved his life — as required by OR-OSHA and the employer’s loss prevention plan.

Investigation revealed that the employer had not been enforcing speed limits or traffic patterns at the site of the accident or at other port areas, nor had the employer posted signs notifying drivers that pedestrians were in the area. Had vehicle operators not been permitted to rush to and from the lunchroom site in a haphazard manner and to operate in

pedestrian zones, this accident would not have happened.

The top loaders and other vehicles were owned by one entity whereas the drivers were supplied by another. Investigators believed an inadequate line of supervision may have contributed to this accident. Because the port was the employer, the port’s authority extended to the entire workforce, whether or not employees were on the port’s payroll.

The employer failed to adequately supervise and instruct the workforce on specific issues relating to the work being performed, including use of PPE.



# SAFETY NOTES

Department of Consumer & Business Services  
Oregon Occupational Safety & Health Division  
Salem, OR 97310

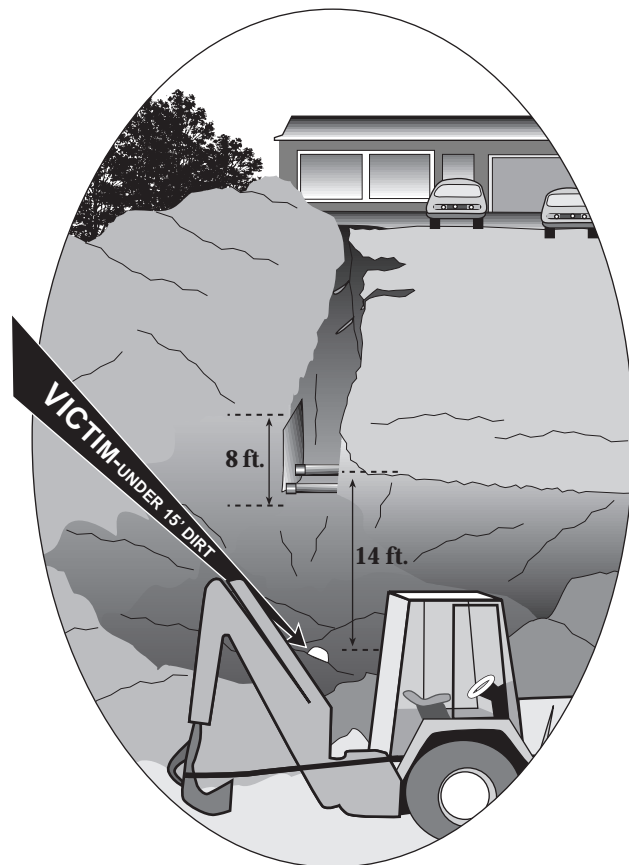
## Fatality Report

### Accident Summary

Accident type ..... Trench cave-in  
Industry ..... Backhoe excavation  
Employee job title ..... Backhoe operator

### Description of accident

At a residential excavation site, the backhoe operator had spent most of the day digging a 75-foot-long unshored trench approximately 8 or 9 feet deep, which connected to another trench approximately 14 feet deep. He and a pipelayer had laid all but 20 feet of ABS pipe in the trench. The backhoe operator entered the trench, removed the outlet cap over the end of the connection, then left to get the final section of pipe. He returned to the trench with the pipe and began connecting it. As he did so, the face of the trench began to slough and crack. The pipelayer warned the backhoe operator, who gestured that it was OK. The wall began to collapse, partially burying the backhoe operator. The pipelayer grabbed one of the backhoe operator's arms and pulled as the wall continued to collapse. He lost his grip and began to dig. The pipelayer gave up his frantic digging as soil continued to cover the backhoe operator. He ran to a next-door residence and asked the owner to call emergency services, then ran back to the site of the cave-in to resume digging. When the trench rescue unit from the local fire department arrived, they determined that the backhoe operator had expired, and spent about five hours recovering the body, which was taken to the county medical examiner.



### Accident findings

Investigation revealed that the employer regularly left trenches unshored and allowed unsafe tunneling by employees. According to employees interviewed, the company owned only two pieces of speed shoring for two crews of several employees working the same shifts in different locations. In addition, the speed shoring and ladder at the site of the accident needed repairs. The employee was aware of the need for repairs but hadn't followed through. The

employer had been cited several times by OR-OSHA for unsafe trenches and excavations and was fully aware of standards. The employer failed to provide a competent person at trenching and excavation sites; nor had he provided adequate safety training for his crews. In the several lost-time injury cases that had occurred in the company's past, the employer had failed to fully investigate and take corrective action, as required by law.

# SAFETY NOTES

Department of Consumer & Business Services  
Oregon Occupational Safety & Health Division  
Salem, OR 97310

## Fatality Report

### Accident Summary

Accident type ..... Asphyxiation

Industry ..... Plastic pipe corrugation

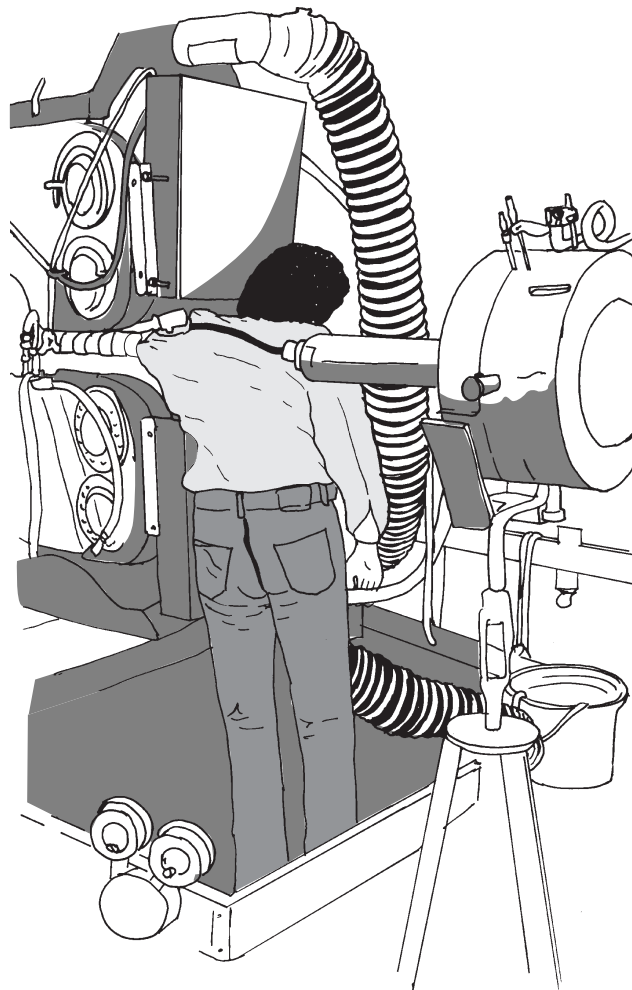
Employee job title ..... Corrugator operator

### Description of fatal accident

A plastic pipe corrugator operator working in a small manufacturing plant had completed production of 10-foot pipe sections and was changing over to production of 100-foot pipe sections. With the corrugator in operation, the victim had been making adjustments to the wafer discs located on the end of the rod attached to the round head of the extruder. Shortly before production of the 100-foot pipe sections began, a problem was discovered with the wafer disc rod, and the corrugator was shut down while it was replaced.

The corrugator was restarted, and for unexplained reasons, the victim put his left hand in the infeed of the corrugator reaching toward the wafer discs. His arm was pulled in. Although the victim was able to strike the shut-off switch on the side of the corrugator, the molding cup chain continued to move, and the victim's chest was forced against the corrugator.

A worker on the same shift, who had been in the rest room, returned to work, discovered the victim in the corrugator, and dialed 911. The victim died before emergency crews arrived at the plant.



### Accident findings

The plant manager in this fatality case admitted that the plant had no lockout/tagout program in effect at the time of the accident. Neither had the employer established a safety committee nor implemented a hazard communication program. In addition, most of the workers were Latinos with limited English-language skills. The employee handbook was in English.

Had the employer ensured that a lockout/tagout program was in

effect and that the employees understood how to use it, this accident would not have happened.

The employer was directed to establish a safety committee; to develop, implement, and maintain a hazard communication program; and to ensure that employees utilize lockout/tagout procedures when making adjustments or performing maintenance or repairs on all energized equipment.

# Oregon OSHA, Safety Engineers Seek Award Nominees

The Oregon Department of Consumer & Business Services Occupational Safety and Health Division (OR-OSHA) and the Columbia-Willamette Chapter of the American Society of Safety Engineers (ASSE) are seeking nominations for the 1999 Oregon Governor's Occupational Safety and Health Conference Awards. These highly competitive awards honor companies, individuals, and associations who are pioneers in creating safe and healthful workplaces for Oregon workers.

The selection process for the awards will proceed parallel to planning for the 26th Biennial Oregon Governor's Occupational Safety and Health Conference. Recipients of the awards will be honored at a luncheon awards ceremony on March 11, 1999, the final day of the conference.

The 1999 Oregon Governor's Occupational Safety and Health Conference will be held at the

Oregon Convention Center in Portland, March 8-11, 1999. Anyone wishing to nominate an individual, a team, or an organization for their achievement in one or more of the award categories should contact OR-OSHA for a nomination packet. The deadline for submitting nominations is October 1, 1998.



For more information about the conference or the awards nomination process, contact Karen Blythe (503) 665-1149. ■

**YES!** Please mail me a nomination packet

I want to receive an awards nomination packet for the 1998 Oregon Governor's Occupational Safety & Health Conference, March 8 - 11, 1999, in Portland, Oregon.

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

City: \_\_\_\_\_ Fax: \_\_\_\_\_

Phone: \_\_\_\_\_

## **Employer awards**

Five awards will recognize employers that have made an outstanding contribution to occupational safety and health. Categories for nomination are: small employer (up to 30 employees), medium employer (31-99 employees), large employer (more than 99 employees), public employer, and new business (companies established in Oregon for five years or less).

## **Safety committee awards**

These awards recognize private and public safety committees that have made substantial efforts in the prevention of workplace injury and illness. Categories for nomination are: small employer (up to 30 employees), medium employer (31-99 employees), and large employer (more than 99 employees).

## **Individual awards**

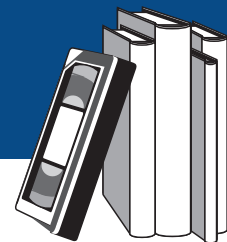
These awards are for an individual or team who has made a significant contribution to the field of occupational safety and health. Categories for nomination are: safety professional, individual or team, industrial hygienist, health professional, and labor representative.

## **Association award**

This award is for any Oregon trade association, labor union, or business association that has made significant contribution to the field of safety and health on behalf of its members.

## **Livesaving award**

This award is for an individual or individuals who, while on the job, demonstrated extraordinary efforts to save the life of another person. ■



## No vacations for safety!

By Don Harris,  
AV Librarian, Oregon OSHA

You may have seen the movie *Death Takes a Holiday*, either in its original 1934 production or in the 1971 made-for-TV version. In either case, it's likely you were struck, as I was, by the underlying premise of the film, that death could "take a holiday," so that for a period of time no one in the world would, or could, die.

Unfortunately, reality is more accurately represented by another movie, a selection from the Oregon OSHA audiovisual library video entitled *Dancing Alone*. The characters in this movie are not actors, but real people. The viewer is brought into a poignant series of interviews with co-workers, friends, and family members of a man killed in a workplace accident. Though the video itself is brief (less than 15 minutes), the viewer comes away with a profound sense of his or her own mortality and with the feeling that occupational safety and health is, after all, something to be taken seriously.

Without being too grim, I'd like to suggest that such reflections aren't entirely inappropriate as we move into the spring and summer months. While nature itself is bursting with new life and activity, employers and workers in our state typically reflect this by moving into high gear within their own industries. But before we get too busy, we might want to remind ourselves that death doesn't take a holiday, and that more

injuries and fatalities occur during these months when workplace activity is at its height. The temptation is to let things slip, to shorten or skip a safety committee meeting, or to take a dangerous shortcut on the job. But when safety takes a vacation, tragedy works overtime.

*Dancing Alone* and other programs available from our audiovisual library help us to pause, take a breath, and focus on our priorities. In the rush of business, this is time

well-spent. Knowledge and awareness can make the difference between life and death for workers in Oregon. Access to this knowledge is available at Oregon OSHA on videotape, in print, and in person at little or no cost to you. All you have to do is ask. We hope you will.

If you have questions about the Oregon OSHA audiovisual library, please contact Don Harris by phone, (503) 378-3272; fax, (503) 373-7014; or e-mail, [don.j.harris@state.or.us](mailto:don.j.harris@state.or.us). ■

## New arrivals for 1998

The following programs have been added to the OR-OSHA AV Library and are now available for scheduling.

- Agricultural Safety Training Manual (#477)
- Ergonomics: the Practical Approach (#770)
- Fall Protection Systems (#772)
- Fire... in the Workplace (#773)
- Dealing with Manual Handling (#774)
- Recognition, Evaluation & Control of Hazards (#775)
- Lockout/Tagout: When Everyone Knows (#776)
- Safe Handling of Gases (#777)
- Latex Allergy: Stop the Reaction! #778)
- Accident Investigation (#779)
- Setting the Standard: an Overview of Heli-logging (#780)
- The Ultimate Driving Challenge (#781)

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# Oregon has 13 SHARP employers!

By Jani Johnston,  
Executive Assistant, Oregon OSHA

That's SHARP – as in Safety and Health Achievement Recognition Program. SHARP is a program of the Oregon Occupational Safety and Health Division (OR-OSHA), Consultation and Services Section. It provides an incentive for Oregon employers to work with their employees to develop and implement effective Injury and Illness Prevention Plans (I&IPP).

OR-OSHA encourages employers to use OR-OSHA consultation, technical, and education resources, and to involve their employees in establishing effective I&IPP. The program provides public recognition of employers and employees who have worked together successfully to prevent injuries and illnesses in their workplaces and awards a certificate of achievement signed by the administrator of OR-OSHA. All Oregon employers are eligible, regardless of size or type of business.

If you want your business to be a SHARP employer, you must agree to a comprehensive consultation that includes a complete I&IPP assessment and a rating of the plan's effectiveness. A comprehensive consultation addresses all real and potential safety and health hazards, and administrative issues and programs and reviews the business's injury and illness prevention plan. A consultant works with you to correct identified hazards and to put an effective plan into action. A SHARP employer must involve employees in the development, operation, and improvement of all elements of its workplace safety and health plan and in the decisions that affect their safety and health. This is usually accomplished through the safety committee process.

After the consultation, a written report to the employer explains the findings of the visit and confirms correction strategies and schedules. The report may include recommendations for hazard correction, improvements to the injury and illness prevention plan, and the employer's proposals for meeting SHARP requirements. For a year or more after the consultation, the OR-OSHA consultant remains available to help develop an action plan. After implementation of the plan, the employer requests a final, on-site evaluation for SHARP approval.

Spirit Communications, Inc. of Tualatin was Oregon's first SHARP-certified employer. Spirit Communications has continued to be active in the program and received the first SHARP certification renewal last October. The company installs communication systems primarily in new construction. Barrett Business Services of Eugene began working towards SHARP certification in

December 1996 and received its certificate in August 1997. The Eugene office is one of several in Oregon working with temporary and leased employees for many industries in the state. The Albany Copeland Lumber Yards, Inc. received SHARP certification in October 1997. It's part of a chain of stores that sell lumber and building materials in five western states and has an excellent safety record.

Would you like to contact a SHARP employer and find out what it's like to work with an OR-OSHA consultant? A complete list of Oregon's SHARP employers is available on the Internet at <http://www.cbs.state.or.us/external/osha> or you can call the OR-OSHA Consultation and Services Section, (503) 378-3272. The list includes the name and telephone number of a contact person at each business. For more information on this program, please call any OR-OSHA office. ■



## Ask OR-OSHA ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?

Applying OR-OSHA standards to “real-life” situations may not always be “standard” procedure. Sometimes, answers and solutions to problems can be tricky. Ask OR-OSHA is a regular feature of *Resource* so that your questions concerning OR-OSHA standards and your business may be answered by experts. So please, Ask OR-OSHA by calling the Standards and Technical Section, (503) 378-3272 or e-mailing your question to [tech.web@state.or.us](mailto:tech.web@state.or.us). We’ll answer your question(s) as quickly as possible. We’ll also print selected questions and answers in this newsletter so that the answer to your questions may help someone else.

### Q What is the proper procedure for disposing of fluorescent light bulbs?

A Although the disposal of fluorescent light bulbs does not fall under Oregon OSHA jurisdiction, a potential exposure to mercury exists if the bulbs are broken during the disposal process. Exposure limits for mercury are found in the Air Contaminant Standard. To avoid this problem, caution should be used to avoid breakage of the light bulbs. For additional information regarding proper disposal procedures contact the Department of Environmental Quality at 1-800-452-4011.

### Q Is a 10-inch rise for an 11-inch run (approximately 43 degrees from horizontal) an acceptable angle of stairway rise?

A According to OAR 437, Division 2, 1910.24(e), fixed stairs are to be installed at angles to the horizontal of between 30 and 50 degrees. Any uniform combination of rise/tread dimensions may be used that will result in an angle or rise within the permissible range. The standard also requires that the rise height and tread width be uniform throughout the flight of stairs, including any foundation structure used as one or more treads.

### Q What constitutes infrequent or short-duration spray finishing?

A Your question refers to OAR 437-002-107, Spray Finishing, and more specifically to paragraph (1)(a)(A), which states that the rule does not apply when spraying is infrequent and of short duration. This exemption applies when the surface area per job is less than nine square feet. In addition, painters must use less than one gallon of paint per workshift, and when multiple spraying jobs are done, the vapors created during the spray finishing must be eliminated before the next job can begin.

### Q Is the use of dual-component spray finishing outside a booth prohibited?

A OAR 437-002-1920.107(m)(1) specifically states that dual-component paints must be sprayed within a spray booth.

### Q What are the posting requirements when a workplace is determined to have a permit-required confined space?

A 1910.146 requires that the employer inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit space. A sign reading “DANGER PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER” or other similar language would satisfy the posting requirement.

The sign should be clearly visible and placed in an area where potential entrants could see the sign. The standard does not contain criteria for size, color, size of print, or composition. In most cases, an 8½-by-11 inch sign posted at the opening to the confined space would meet the intent of the rule. Some of the larger safety supply houses sell these signs. ■

# Beware of hot oil!

By Marilyn J. Scott, CSP, ARM,  
Oregon Health Division, Environmental, Occupational and Injury Epidemiology

Food service workers have the highest number of severe burn injuries of any occupation in Oregon, according to a study conducted by the Oregon Health Division (OHD). Of the 2,306 serious occupational burns that occurred in Oregon from 1992-1997, 34 percent (778) were food service employees. New food service workers suffer the highest number of burns; 427 (55%) incidents occurred during the first year of employment and 131 incidents occurred within the first four weeks on the job. It is startling to note that 100 cases occurred among workers 14-17 years of age.

## The impact of a serious burn

Food service burns occur in restaurants, motels, hotels, hospitals, nursing homes, schools, grocery delis and cafeterias.

Serious burns have a devastating impact on the injured worker's physical, emotional, vocational and financial well-being, particularly when there is a long healing and rehabilitation period. Medical costs

alone can reach \$50,000 or more for serious burns involving hospitalization, multiple skin graft surgeries, occupational and physical therapies, and outpatient treatments. Employers also incur worker replacement and retraining costs in addition to the costs associated with lost time and multiple medical treatments.

## Most common causes of burn injuries

OHD's review of five years of workers' compensation data shows that hot oils, fats, steam, and hot water caused 41 percent of food service burns. Food products, such as coffee or soup, caused 37 percent of injuries and 9 percent were burned while working with stoves, steamers, and fryers.

OHD investigations have found that the most serious burns occur when workers drain boiling fat or oil into containers and then attempt to carry the uncovered container to a waste disposal bin, usually located outdoors. This task often occurs at the end of a shift and before the oil

has cooled to a safe handling temperature of 100 degrees or lower. The risk for a burn injury increases when the floor is slippery from accumulated grease and debris or when the worker must lift the container chest-high or higher for disposal. Using plastic buckets is particularly hazardous because the hot oil melts the plastic.

Burns associated with pressurized cookers occur when the lids blow open because vents are plugged, relief valves are not operating, or lids are forced open before the pressure has dropped to a safe level. Burns also occur when employees heat food containers in deep fryers.

## What can the employer do?

The Oregon Health Division encourages employers to do the following:

- Train workers and frequently reinforce safe work procedures
- Instruct workers to cool hot oil to 100 degrees or lower before disposal

See "Hot oil," on page 16

## RESOURCE

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"Hot oil," from page 15

- Provide containers designed to safely transport waste oil
- Keep cooking equipment cleaned and lubricated as recommended by the manufacturer
- Keep floors clean and dry
- Keep the area around the waste oil container clean and free of debris

For assistance with your occupational safety and health program, contact your workers' compensation carrier or any Oregon OSHA office. ■

## Questions?

OR-OSHA has field offices across Oregon. If you have questions or need information, call us toll free at 1-800-922-2689 or phone one of the offices listed below. (All phone numbers are V/TTY).

### Portland

9500 SW Barbur Blvd.,  
Ste. 200  
Portland, OR 97219  
(503) 229-5910  
Consultations:  
(503) 229-6193

### Eugene

1140 Willagillespie,  
Ste. 42  
Eugene, OR 97401  
(541) 686-7562  
Consultations:  
(541) 686-7913

### Pendleton

721 SE Third St., Ste. 306  
Pendleton, OR 97801  
(541) 276-9175

### Medford

1840 Barnett Rd., Ste. D  
Medford, OR 97504  
(541) 776-6030  
Consultations:  
(541) 776-6030

### Salem

DAS Bldg. 1st. Floor  
1225 Ferry St. SE  
Salem, OR 97305  
(503) 378-3274  
Consultations:  
(503) 373-7819

### Bend

Red Oaks Square  
1230 NE Third St.,  
Ste. A-115  
Bend, OR 97701  
(541) 388-6066  
Consultations:  
(541) 388-6068

### Salem Central

350 Winter St. NE,  
Rm. 430  
Salem, OR 97310-0220  
(503) 378-3272  
Fax: (503) 947-7461

Visit us on the Internet World Wide Web at:  
<http://www.cbs.state.or.us/external/osha>



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