



Small business survival

Small businesses will get big-business consideration at the Oregon Governor's Occupational Safety and Health (GOSH) Conference, March 8-11, at the Oregon Convention Center in Portland.

Because most businesses in Oregon employ fewer than 25 employees, the GOSH Conference is offering its "Small Business Survival Skills Program," March 9, 6:30-9:30 p.m. The evening program includes nine sessions designed to help small businesses reduce accidents, injuries, and workers' compensation rates.

For a fee of \$25, attendees select two sessions, presented by experts including business consultants and representatives from insurance companies, industry associations, temporary employment companies and state agencies. Each attendee also gets a packet of handout materials for all nine sessions and the opportunity to tour the Exhibit Hall until 6 p.m.

Attendees may choose from among the following sessions:

- Return-to-Work Strategies
- Benefits of Safety Committees for Small Companies and How to Conduct Safety Committee Meetings
- Workers Compensation 101
- Temporary Employees and Employee Leasing
- Nuts & Bolts: A Basic Safety Plan for Small Business
- Safety Training that Overcomes Language & Cultural Barriers
- Safety Training Techniques for Small Businesses
- Small Business Step-by-Step Guide to Oregon OSHA Services and Requirements safety and health Internet resource center sponsored by the Center for Research on Occupational and Environmental Toxicology (CROET).

OR-OSHA requests advance registration if possible, in order to have adequate class space, materials, and refreshments. On-site registration will be available. Please call OR-OSHA, (503) 378-3272 for more information. You may also dial (888) 292-5247 and select Option 1, or send e-mail to Oregon.GOSH@state.or.us. ■

Construction fatalities

Construction is one of the most hazardous industries in the world and in Oregon. Each year, a substantial number of construction workers lose their lives, and many are injured. Estimates from a variety of sources indicate that construction-related accidents cause between several hundred and 2,000 deaths a year nationally. In Oregon, construction-related fatalities averaged 10 a year for the five-year period 1993-1997.

Craig Dutcher examined 50 Oregon construction-related fatalities from 1993 to 1997. The majority involved motor vehicle use, including accidents that occurred on highways or at job sites. After vehicle-related fatalities, falls from elevations were the next most common cause of construction-related fatalities.

Dutcher, manager of OR-OSHA's central region, said

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that his examination of construction-related fatalities is part of a process to identify leading causes of on-the-job fatalities and injuries in order to utilize division resources better and employer and employee time more effectively.

“We’re in the process of developing focus inspection programs,” said Dutcher, “that will target dangerous job activities. We expect to have established these focus inspection programs by mid-year. This will help ensure that instead of spending time and resources examining electrical cords, for example, an area where problems are not outstanding, we will be putting our resources where they are most needed.”

Dutcher will enlist the help of “stakeholder groups” to establish focus inspection programs. The goal of the focus inspection groups is to reduce construction-related fatalities by 15% within five years.

Employers and employees from around Oregon who are interested in participating in the stakeholder meetings with the Focus Inspection Team, may call OR-OSHA, 378-3274. Dutcher plans to have the first meeting in February.

Dutcher said that compliance officers could visit job sites to conduct focus inspections after the stakeholder groups and OR-OSHA identify and rank priorities. He hopes that focus inspections will include such areas as fall protection, vehicle maintenance, and the supervision and training necessary for both.

Some interesting conclusions drawn by Dutcher:

- The number of construction fatalities investigated by OR-OSHA for the five-year period, 1993-1997, was 35. Fifteen compensable deaths were not investigated by OR-OSHA because employees were working out-of-state (3 instances), fatalities occurred on public highways and were investigated by local law enforcement agencies (10 instances), and cause of death was asbestos exposure occurring 10 years ago or more (2 instances).
- The construction workforce increased by 52 percent during the five-year period, from 54,000 in 1993 to 81,700 in 1997.
- Forty-two percent of construction-related fatalities resulting from falls occurred in roofing and 30 percent in steel erection.
- There is no significant difference in the distribution of fatalities among union and non-union worksites.
- There is an even distribution of fatalities throughout the nine-hour workday period, 9 a.m. to 6 p.m.
- Fifty-two percent of all fatalities occurred within the first twelve months of employment. Moreover, thirty-eight percent occurred within the first six months. Twenty-eight percent of all fatalities involved vehicle operations and employees with less than 12 months’ experience with their employee. ■



Breathe Right

Brand new!

This guide is intended for small-business owners and managers who need to develop a basic understanding of workplace respiratory hazards and OR-OSHA’s requirements for controlling them. It covers elementary concepts of respiratory protection and offers guidelines for complying with the Respiratory Protection Standard, 29 CFR 1910.134.

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 a charge for additional copies.

Publication Spotlight

Breathe Right!
OR-OSHA's Guide to
Respiratory Protection for
Small Business Owners
and Managers

Administrator's Message



Peter De Luca

The first quarter of 1999 is a good time to look back at the significant events of 1998. Statistics released in December of 1998 indicated that lost workday

cases incidence rates (LWDCIR) for 1997 followed a trend of reductions that began in 1988. The LWDCIR includes injury and illness cases that resulted in one or more days away from work. Both the 1997 private and public sector lost workday cases incidence rates are record lows in Oregon.

Once again, worker's compensation pure premium rates are low and projected to decline by 4.8 percent in 1999. This marks nine consecutive years of rate reductions in Oregon, making our state a competitive place to do business. Fewer claims were filed, meaning fewer workers were injured, resulting in a total 54.7% cut in workers' compensation insurance costs since 1990.

Proposed changes to Division 1 generated strong public comment at the end of 1998. After officially withdrawing its proposed version of Division 1, OR-OSHA invited all interested parties to meet and talk about the issues. Approximately 120 people attended the Division 1 Advisory Group meeting on January 13. The large group broke into six interest groups that are meeting weekly. I look forward to the product of their collective knowledge. This was an important lesson for us. To operate a world-class occupational safety and health organization, the valuable partnership between government, labor and management (business) must be reinforced.

Consultative Services has now recognized 21 companies that have achieved SHARP status; seven have received sec-

ond-year status. This is exciting news. We are aware that it takes businesses working cooperatively with employees to institute good safety and health management plans (sometimes called injury and illness prevention plans) if we are to achieve our ultimate goal of "0" injuries and illnesses in Oregon. A complete list of SHARP companies is available on our Web site. Many of these companies are willing to talk with other companies about how they achieved this success.

We now have two Voluntary Protection Program (VPP) sites in Oregon. International Paper in Gardiner achieved "Merit" status in 1998 and Kerr-McGee in The Dalles has remained a "Star" site since 1997. Companies that seek VPP status have told us that they do so not as a recognition tool or for the inspection exemption it affords them, but because statistics show that VPP sites have fewer injuries and illnesses than similar worksites all over the United States.

Another noteworthy accomplishment is the Joint Emphasis Program. Staff from OR-OSHA and the construction community joined together in a cooperative learning mode and worked on common ways to solve safety hazards in the construction field. The ladder safety program designed and taught by the group has been well-received and is expected to expand throughout the state. The group is discussing what subject to tackle next.

The Education Section provided training to more than 12,000 people through workshops, conferences, and a successful Web-based training program. And, of course, every two years the premier occupational safety and health conference takes place at the Oregon Convention Center: the Governor's Occupational Safety and Health conference will offer more than 120 exhibits, 80 training sessions, and 20 full-day workshops. I strongly encourage you to set aside March 8-11 to attend this event.

One of the most significant events of 1998 came in the form of a case from the Court of Appeals, *Oregon Occupational*

Safety and Health Division v. Eslinger Logging, Inc. In this case, the Court of Appeals agreed with OR-OSHA on several points. OR-OSHA has the statutory right to interview employees privately because "private interviews with employees play a major role in enforcing the Oregon Safe Employment Act and thus protecting worker safety." The presence of an employee representative is not a right of the employer and citations are valid even if employees decline to participate in an inspection. Most important, the Court said: "Hearings on alleged violations . . . should focus on the merits of the allegations rather than on attempts to find minor flaws in OR-OSHA's investigation. The primary purpose of the hearing is to examine the conduct of the employer, not of OR-OSHA."

While this case is clearly not an invitation for OR-OSHA to violate its own rules or to violate employer rights, it does focus on the need for discussion between OR-OSHA and employers on safety in the workplace. This has been a goal of my administration. Achieving this success in the Court of Appeals is very meaningful.

Overall, it was a productive year. We learned things that will help us move forward into the 21st century. With your help, OR-OSHA will achieve its mission: to advance and improve workplace safety and health for all working Oregonians. ■

If you'd like more information regarding the progress of the Division 1 Advisory Group or the programs referred to in the "Administrator's Message," call any OR-OSHA field office or visit our Web site www.cbs.state.or.us/osha.

Scaffolding roundtable addresses industry issues

In an effort to form partnerships and discuss the new scaffolding standard with those working in construction, Oregon OSHA held its first scaffolding roundtable in November, and is planning another for next November.

Jerry Cotter, OR-OSHA, internal training coordinator, said that the roundtable, held in the United Brotherhood of Carpenters Training Center in Portland, attracted about 40 individuals, mostly construction erectors and dismantlers and OR-OSHA staff.

The scaffolding roundtable was part of the annual regional meeting of the Scaffold Industry Association. Participants selected topics from a list of 12 issues related to the new scaffold standard. Ideas and suggestions from the roundtable were discussed further at a Jan. 20 OR-OSHA meeting in Eugene.

“It’s a part of our five-year strategic plan to be forming partnerships with those working in the construction field,” said Cotter. “While we would like to have attracted more contractors, we felt that our first meeting was a good exchange of ideas and information. The group discussed some ‘gray areas’ of the new scaffolding standard. For example, what does ‘feasible’ mean in the standard?”

Cotter said that contractors, erectors, and dismantlers interested in participating in the next roundtable could call him at OR-OSHA’s central office in Salem, 947-7877, or call Michael Humphrey at the United Brotherhood of Carpenters Training Center in Portland.



Participants at the first scaffolding roundtable in Portland had an example of a scaffold in their meeting room. The roundtable was part of the Scaffold Industry Association’s regional meeting.

Photo by Jerry Cotter

Issues discussed at the roundtable, likely to be raised again at the next one, included fall protection during erection and dismantling, competent person, access-egress to the scaffold, communication between erectors and general contractors, and who is responsible for figuring load capacity.

Although policy cannot be changed at these roundtables, issues raised do receive research and consideration as OR-OSHA adopts and revises standards.

The November scaffolding roundtable was facilitated by Burton White, a Portland-area mediator to the construction industry. The discussion panel included Robert Bridges of Safeway Scaffolds;

Francis Lombardi of Ivy Hi-Lift; Michael Humphrey of the Carpenters-Employers Apprenticeship and Training Trust; and from OR-OSHA: Ron Preece, Technical Section; Bob Bryant, Consultation Section; and Ken Heehn, Enforcement Section.

Free copies of the scaffolding standard are available from the OR-OSHA Resource Center, 350 Winter Street NE, Room 26, Salem, OR 97310. You may also call toll-free, 1-800-922-2689 or (503) 378-3272, or fax your request for a copy to (503) 947-7463. Questions about the standard may be directed to Ron Preece or Marilyn Schuster in the Standards and Technical Section, (503) 378-3272. ■

What can go wrong?

If you've been putting off thinking about the so-called Y2K computer bug because you've 1) assumed your computers won't experience problems, 2) counted on someone else to deal with it, or 3) just been too busy, it's time you paid attention to the potential for problems.

Remember, although some systems may not fail at all, other systems will begin failing even before the century date changes because they perform forecasting and future processing.

Problems may occur internally or may *affect* you even though you believed your business to be prepared. For instance, if your local utility fails to provide you with water, gas, or electricity, your buildings will not be usable, and your up-to-date-with-Y2K systems will be of little immediate value.

Are there Y2K problems lurking in your janitorial, repair, or delivery services from the "outside"? What about computer chips programmed to print out routine maintenance messages?

According to a U.S. Department of Labor flier, one employer conducted a test and found that all of the fire sprinklers in the facility would have been activated. A petroleum company found out that its offshore oil rig would have shut down at the dawn of 2000, had the company not tested for Y2K problems and made changes.

You may want to evaluate all controllers, alarms, lighting, air monitoring devices, hazard communication databases, HVAC systems, underground storage tank monitors, security systems, elevators and generators.

The Federal Reserve Board, at its Y2K Web site (<http://www.sba.gov/y2k/indexcheck.html#top>), suggests a five-step plan to achieve Y2K compliance.

- **Step 1:** Educate and involve every level in your organization. Keep staff and business partners informed, and don't forget to re-train as employees leave and move to other jobs.

- **Step 2:** Inventory all the computer-based systems, components, service providers, and hardware that contain microchips that support your business. Rank each by how critical it is to conducting business. Keep the information in a spreadsheet or database that makes sorting and reporting on items that are not ready easier.

- **Step 3:** Starting with the most critical items on the inventory, determine which are date-sensitive, and if they will fail when the century changes. Assess these systems and hardware first.

A date-sensitive system is one that manipulates or works with dates in some way, or a system that operates differently based on the date. Examples include systems that perform forecasting or projection functions, such as calculating interest on loans or projecting inventory levels, or invoice systems that retrieve records based on a date. Date-sensitive hardware examples include lighting systems that switch on automatically, manufacturing control systems, and scanners or card readers that read ID badges or credit or debit cards.

One way to assess a system is to examine computer code and follow the logic. If your system is based on a purchased package, contact the vendor. Another way to assess a system is to roll the dates forward and run the system. This can be risky. Understand what the risks are before attempting such an assessment.

Develop a strategy for dealing with any problems you find in the assessment phase. If there is a problem with your computers, there are only three options: repair, replace, or retire.



Repair involves a couple of options: windowing or date expansion. If replacement is called for, you can build replacements in-house, purchase a replacement system from a vendor, or outsource that particular portion of your business to an outside service provider.

- **Step 4:** Correct and test your system. Testing may begin with ensuring that the changed system runs properly with dates before the year 2000, then testing to see that the system rolls over from 12/31/1999 to 1/1/2000 properly. There are many more steps. Find suggested testing criteria at the Federal Reserve Web site (address above).

- **Step 5:** Move your repaired or new system into production. If possible, install the readied system and run it parallel to the old system. Your contingency plans should *not* include reverting to the old system.

The Federal Reserve uses a standard for year-2000 readiness: "Systems (e.g. software, hardware, and firmware) are defined as ready if they can demonstrate correct management and manipulation of data involving dates, including single-century and multi-century formulas, without causing abnormally ended scenarios within the system or generating incorrect values involving such dates."

There are probably thousands of Web sites that can help you discover and solve Y2K problems. In addition to the site above, you may

See "[What can go wrong?](#)," page 6

Oregon OSHA receives Gore's "Hammer" award

One of Vice President Al Gore's coveted "Hammer Awards" can be seen in the OR-OSHA office in Salem. The award was presented to OR-OSHA and federal OSHA in November in a ceremony in Gov. John Kitzhaber's office. Peter De Luca, administrator of Oregon OSHA, and Richard Terrill, regional administrator of federal OSHA's Region X office were on hand to accept the award from Janice Warden of the Vice President's office.

The award honors those who have made outstanding efforts to make government more efficient and less expensive.

OR-OSHA's award was for its first-in-the-nation comprehensive performance agreement with the U.S. Labor Department's Occupational Safety and Health Administration (federal OSHA). In contrast to the infamous \$400 Pentagon hammers, the award consists of a \$6 hammer, a ribbon, and a note from Gore.

"This is a great honor for Oregon OSHA," said Gov. Kitzhaber. "This award demonstrates once more that Oregon is a national leader in innovative government."

"The performance agreement measures how we do our job, rather than just counting numbers," said De Luca. "Oregon OSHA exists to help keep Oregon's 1.5 million workers safe and healthy on the job. They are the true beneficiaries of this performance agreement." ■



Governor John Kitzhaber, Richard Terrill, Peter De Luca, and Janice Warden. Photo by Jani Johnston

"What can go wrong?," from page 5

want to visit these:

- <http://www.year2000.com> (Peter de Jager's site, a good source of links to other sites)
- <http://www.compinfo.co.uk/y2k/manufpos.htm> (contains links to computer manufacturers' home pages, where you can find year-2000 compliance information)
- <http://www.software.ibm.com/year2000/> (IBM's year-2000 page)
- <http://www.gmt-2000.com/main.htm> (the link to Greenwich Mean Time's home page with evaluations of PC testers and BIOS chips, which are useful for PC evaluation)
- <http://pw2.netcom.com/~helliott/00.htm> (The so-called "mother of all Y2K link sites" contains many links to other sites)
- <http://www.jks.co.uk/y2ki/confer/notices/dtismo1.htm> (links to a report, "Helping the Small Business Tackle Year 2000")

Other avenues for help: If there isn't a year-2000 user group in your city, you may want to form one. Contact a consulting firm or an independent consultant. There is even a magazine dedicated to the Y2K problem, *The Year 2000 Journal* (<http://www.y2kjournal.com>). ■

SAFETY NOTES

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

Fatality Report

Accident type Rigging fall
Industry Logging
Employees' job titles Rigging slinger, chaser,
choker setter

Description of accident

A rigging slinger and a chaser were killed and two choker setters were injured when they fell from the rigging while using chokers to assist their ascent out of a steep logging unit. The four men were hanging on to choker cables on a skyline carriage and attempted to let the system lift them up a 50-foot-high rock bluff. One employee released and fell 20 feet, suffering a sprained ankle. Two employees hung on until they were 150-200 feet high, then fell to their deaths below the bluff, and one employee was able to hang on until the carriage moved above the bluff, where he fell 70 feet, breaking his leg.



Investigation findings

Employees must not be permitted to walk the rigging in. Employees should be clear of the rigging before the go-ahead signal is given.

SAFETY NOTES

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

Fatality Report

Accident type Fall
Industry Construction
Employee job title Pipefitter

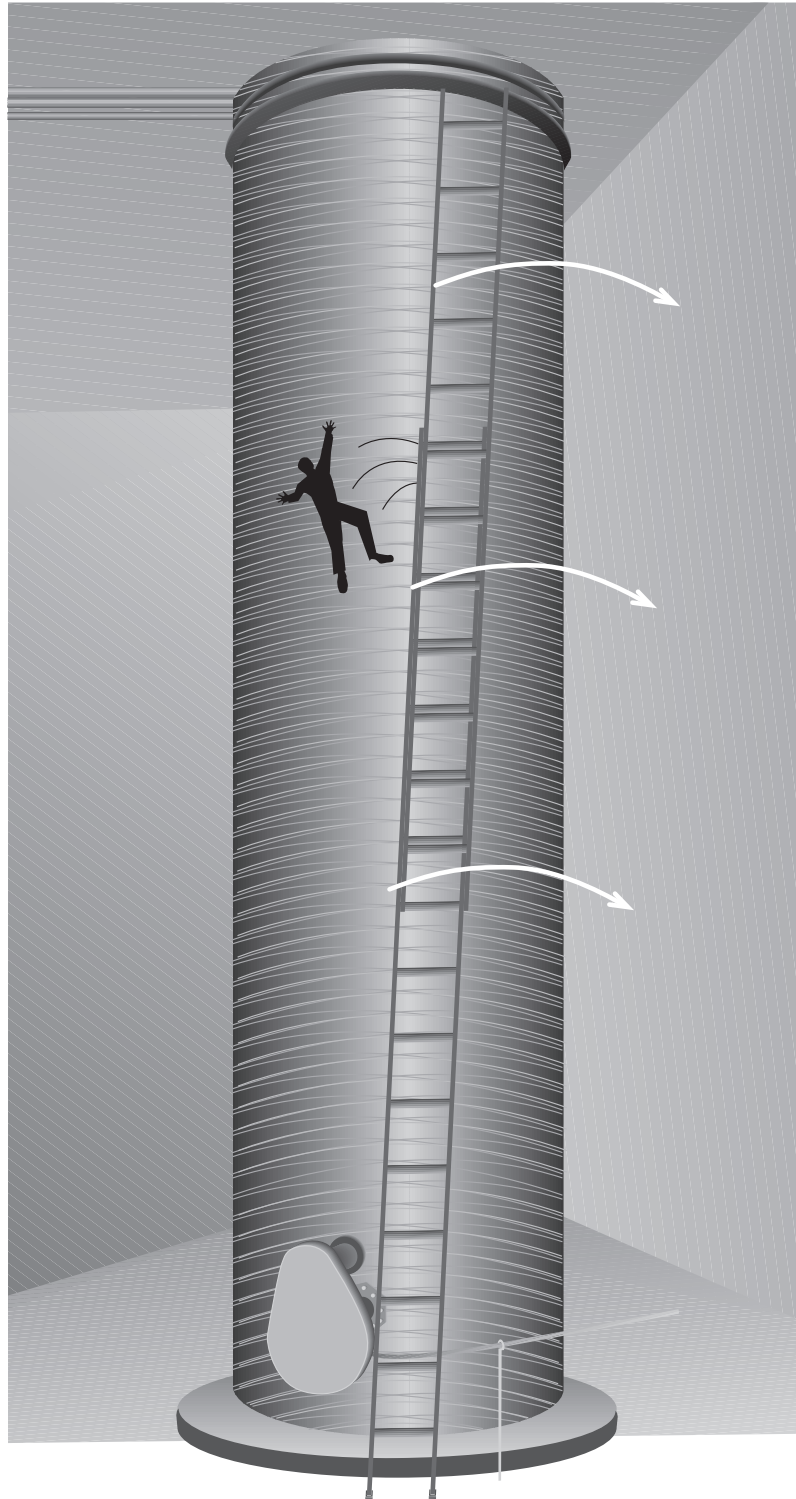
Description of accident

The pipefitter was directed to get a measurement at the top of a 25-foot fiberglass tank. With the assistance of a co-worker, the pipefitter placed a ladder against the tank. He tied off the bottom of the ladder to pipes attached to the base of the tank. He ascended the ladder, stood on the top rungs and took measurements. While he was descending, the ladder slipped against the slick fiberglass surface and twisted, causing the victim to lose his balance and fall approximately 18 feet to the concrete floor. He died of massive head injuries.

Investigation findings

The victim had been on the job only four days. The employer failed to ensure that he was trained in the use of ladders and failed to ensure that he used the ladder properly. Upon investigation, it was learned that the company's safety policies and procedures were not uniformly enforced. Also, the ladder was defective, but had not been tagged or removed from service. This may have contributed to the accident because the side rails were twisted and dented, the rungs damaged, and the halyard missing.

An employer must provide safe equipment to workers and must provide adequate training and supervision to ensure safe operation.



HAZARD ALERT

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



Hydrofluoric (HF) acid in common commercial cleaners for car washes, auto detailing, and farm equipment

By Brian Hauck
Health Compliance Officer, Oregon OSHA

Hydrofluoric (HF) acid is being used as an ingredient in a number of common commercial cleaners in significant quantities. Specifically, it is used in wax removers for the cleaning of walls inside drive-through car washes, for cleaning farm equipment, and in spoked-wheel cleaners.

Recently, a car-wash worker was afflicted with severe tissue burns on his feet after spilling car wash cleaner on his shoes. The cleaner had been diluted to a solution that contained approximately two percent HF. In this low concentration, the warning sensation of pain was delayed and the HF had saturated deep into his tissues before the worker sought medical attention. This car-wash worker lost three weeks of work.

Health effects

Skin contact even with very diluted solutions should be considered dangerous. Solutions of less than two percent can cause burns. The process of tissue destruction and neutralization of HF acid can be prolonged for days, unlike other acids which are rapidly neutralized. Damage occurs often without any warning sensation of pain in the early stages. As the HF concentration increases, so does the rapidity

of tissue destruction and severity.

The onset and severity of burns will depend on the extent and duration of contact as well as the concentration of HF. All cases with extensive skin burns will have some vapor inhalation unless a respirator was used.

Eye exposure to liquid hydrofluoric acid can result in serious injury. The cornea and conjunctiva can be damaged by hydrogen fluoride gas exposure alone.

Precautions for safe use:

The personal protective equipment requirements for eye and skin contact are outlined in the table below. Due to the serious burns that can occur even at low concentrations, it is important to select the proper protective material. Neoprene and Nitrile-NBR are the best materials to be used with HF.

% HF by weight	Approximate pH	Appropriate protective wear and emergency devices
>20.0%	1.2 or less	Safety shower, eyewash, face shield and goggles, acid suit, boots and gloves
2.0 to 20.0%	1.2 to 1.7	Safety shower, eyewash, face shield and goggles, gloves, aprons, boots and rubber sleeves
0.2 to 2.0%	1.7 to 2.2	Eyewash, goggles, gloves and apron
<0.2%	>2.2	Protective equipment not normally required

See "Hydrofluoric acid" page 10

First aid

First aid for skin or eye contact with hydrofluoric acid must include immediate washing of the affected area with water for at least 15 minutes. The use of water is critical but may not stop all destructive action due to the acid. Thus, after water washing the victim should receive professional medical treatment immediately. Application of a calcium gluconate gel or magnesium oxide paste to skin burns and sterile one percent calcium gluconate in saline drops for eye burns will limit tissue damage. This treatment should be applied by first-aid personnel thoroughly trained in its use, preferably while en route to a medical facility.

In the case of inhalation exposure

or the appearance of burns on the nose or mouth, transport the victim to a treatment facility immediately. If treatment facility is not nearby and the acid is concentrated, the victim can breathe 100 percent oxygen by mask at the worksite with a nebulized mist of 2.5 percent calcium gluconate. If acid is ingested and the person is conscious, give him or her large quantities of water immediately. Do not attempt to make the person vomit.

HF poses a serious inhalation hazard. For this reason, liquid HF cleaner should not be applied with pump sprayers, because it puts the HF in aerosol form.

References:

OR-OSHA Program Directive A-204

Program directives are available on the OR-OSHA Web site under the “Standards” subject bar.

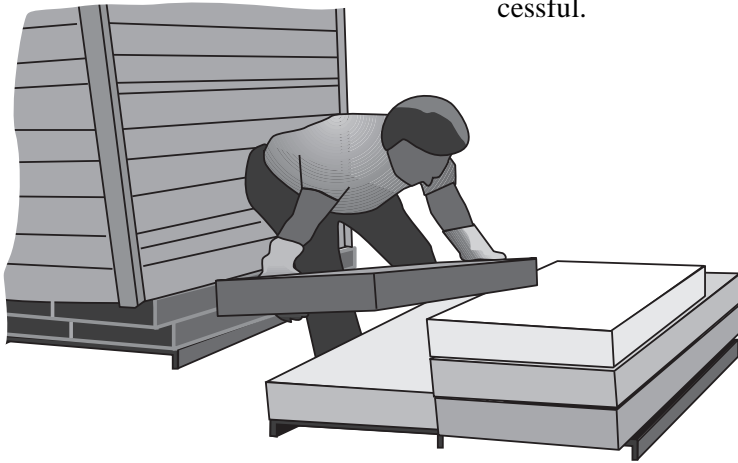
WORKSITE REDESIGN PROJECT

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

Self-adjusting ergonomic loader/stacker

This employer applied for a worksite redesign grant to research and develop an innovative way to solve a manual material handling problem. Previous efforts included job rotation, employee training on correct lifting procedures, and using off-the-shelf equipment. These efforts weren't successful.

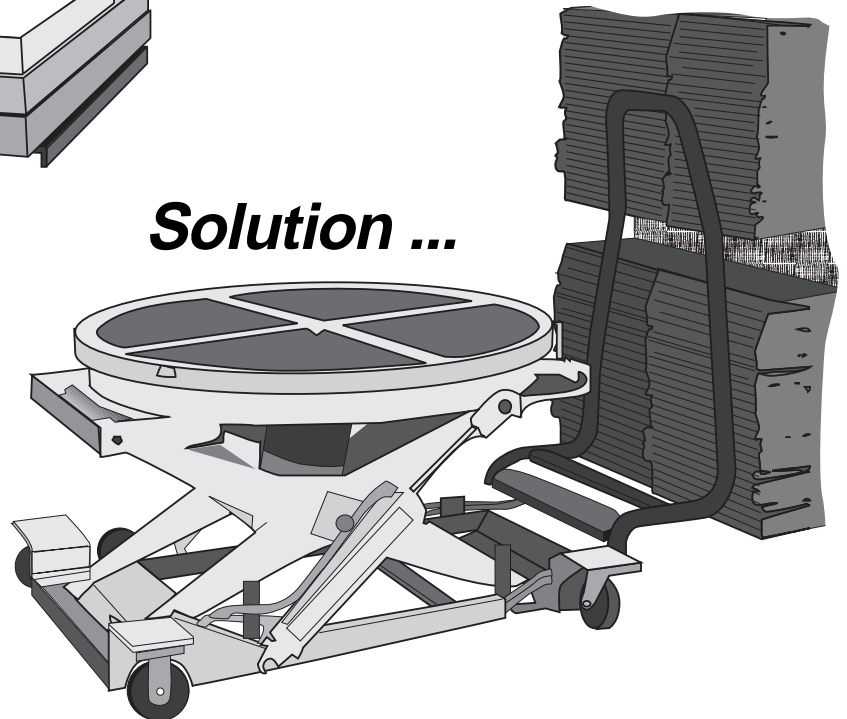
Problem ...



Industry-wide, employees working as machine feeders, off-bearers, assemblers, and operators suffered sprains and strains to the trunk, arms, and legs. The tasks of stacking wood and cartons onto pallets can produce sprains and strains, as can the unloading of materials from pallets. The most hazardous part is lowering the wood or cartons to the floor-level pallet, which involves bending, twisting, and reaching.

In 1992, this company had 108 OSHA-recordable injuries and illnesses. Thirty-three of them were from material-handling tasks such as stacking. In 1993, 31 of their 110 recordable injuries and illnesses were caused by material handling. In 1994 and 1995, 25 recordable injuries and illnesses were due to repeated trauma each year.

Solution ...



Through a grant from Oregon OSHA's Worksite Redesign Program, the employer developed a self-leveling stacker/loader that was versatile enough to be used in the wood industry. Three of the features include automatically adjustable load height to ensure that employee work is at waist-to-shoulder height; a locking, rotating top that prevents twisting; and push/pull handles to assist in the mobility of the unit. Guidelines were developed so that employees can safely use the new equipment.

Got a problem? Maybe we can help.

OR-OSHA's Worksite Redesign Grant Program awards grants to develop and put into use solutions to workplace ergonomic problems that lead to on-the-job injuries and illnesses and that can't be solved with readily-available equipment or processes. These grants are available to Oregon employers, employer groups, employee groups, and educational institutions or organizations.

Examples of workplace ergonomic problems may include exposures to repetitive motion, manual materials handling, excessive noise, chemicals, and temperature extremes.

Grants can be used to design a new machine or tool, develop a new process, adapt existing technology and apply it to a new industry or occupation, or design cost-effective safe improvements to existing technology.

Following is a list of grant recipients and a brief description of the projects they are working on:

Woodfold Marco Mfg.

Produced an automated hinge applicator that prevents repetitive and forceful movements during door assembly.

Multnomah County Animal Shelter

Developed an animal-handling system to prevent muscular strains and sprains among workers who are handling and moving animals.

Wood Products Competitiveness Corp.

Developed a new product called the Auto Loader to help load and move wood products, allowing employees to maintain proper ergonomic posture.

This product was delivered to hundreds of similar Oregon industries and used in many applications.

Oregon Cutting Systems

Is developing an automation system to load chain-saw guide-bars on a paint-line hook to prevent repetitive movements, static posture, and resulting injuries.

ESCO Corporation

Redesigning a casting packaging operation to prevent muscular strains and sprains among workers.

Professional Mechanical

Developed a prototype mechanical assist for pipe welder, which is expected to address exposure to heat, smoke, fumes, ultraviolet radiation, material handling, and ventilation.

Durametal Corporation

Developed a solution to reduce excessive noise levels from vibrators in a casing operation.

Shangri-La

Will develop an automated nailing system to prevent injuries from nail guns.

Bettencourt Transportation Services

Will create an appropriate floor-surfacing material to prevent slips and falls in an environment with heavy vehicle maintenance activities.

Taylor Metal Products

Will design a truck/crane setup to remove large panels of metal roofing from flatbed trucks.

Oregon Disability Division

Will evaluate the best set-up for group homes to accommodate disabled persons and reduce ergonomic and safety risks to employees.

Roadmaster

Plans to reduce grinder noise in the metal fabrication industry by using quieter tools, isolating noisy processes, and making modifications to the overall plant environment.

Costco

Three projects are under way.

1. Tire center: Developing a mechanical assist for moving tires off the shop floor into a storage area to prevent injuries to workers' lower backs.

2. Bakery: Redesigning cake-decorating operations to prevent hand and wrist injuries and illnesses associated with repetitive exertion caused by squeezing flexible icing containers.

3. Front end: Redesigning check-out area to prevent low back injuries associated with awkward postures and exertions among workers who move heavy parcels during check-out.

Danner Shoe Manufacturing

Will develop a method and equipment to reduce injury risk to shoemakers involved in the toe opening and midsole attachment process.

Spirit Mountain Gaming

Will redesign games tables to reduce card dealers' risk of ergonomic injuries.

Boyd Coffee Company

Will address problems associated with repetitive movements in coffee-packing operations and will develop an automated system.

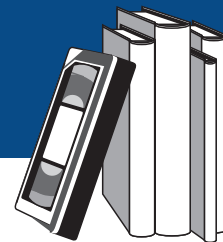
Washington County Emergency Dispatch

Will redesign the call intake/dispatch area to prevent back, neck, and upper-extremity injuries associated with awkward postures.

Oregon Public Education Network

Will design a program to teach appropriate ergonomic habits to students before they enter the workplace, thereby preventing injuries and illnesses associated with computer use.

See "Grants" page 16



Understanding saves the soup!

By Don Harris,
AV Librarian, Oregon OSHA

When I was in my early twenties, I went to work in a large kitchen serving a small college here in the Pacific Northwest. Though I considered myself a fairly good cook (in contrast to my brother, who would have starved if not for “fast food”), it didn’t take long for me to find out that I had a lot to learn! But first, I had to get over what seemed to be an insurmountable obstacle.

I could hardly understand a word anyone was saying. Except for the manager, my co-workers came from every corner of the world. Germany, Switzerland, Italy, and Central America were just some of the countries represented, and I found the heavy accents almost impossible to decipher. Moreover, they spoke in the abbreviated way used by people who have worked together a long time.

Naturally, this caused some problems. My immediate supervisor was a German nun of almost infinite patience, but even she was brought to her wit’s end by my seeming incompetence.

I would hear Sister say, “Here, pour this into that and stir it with this.”

Then, when I attempted to follow her instructions, she would become agitated.

“No, no, no! I said, ‘Pour this into that and stir it with this!’”

The end of the scene was almost invariable. “Oh, you MOOSE! You’re standing right in it!”

This last part was always very clear to me.

After a few months I began to un-

derstand my co-workers and could even follow a little “kitchen shorthand.” The other cultures and languages, which had seemed so confusing in the beginning, became fascinating instead, and the three years I spent there were among the most enriching of my life.

As I reflect on it, it seems to me that this experience in the kitchen holds a valuable lesson, a lesson that the Department of Consumer & Business Services understands.

The people of Oregon are enriched by contact with people of other languages and cultures, and those who speak Spanish certainly play a key role in the exciting development of our state. DCBS knows that this development is not “for free.” Willingness and understanding were needed to make me a tolerable — if not brilliant — kitchen employee. And willingness and understanding are needed now if we are to fulfill our mission of protecting Oregon’s consumers and workers while promoting a positive climate for business in the state.

We want to ensure that those who speak Spanish benefit from our resources and services no less than those who speak English. This means being willing to make an effort, having a willingness to learn. And, it means having resources available in Spanish.

Many of these resources can be found through the Oregon Occupational Safety & Health Division (OR-OSHA) of DCBS. OR-OSHA maintains a Resource Center including several hundred books,

pamphlets, and other publications, with many in Spanish. There is also an audiovisual lending library, including Spanish-language videos in subjects ranging from forklift safety to protection from bloodborne pathogens. These videos and other publications are available for loan to the public, for little more than the cost of return shipping, and the time it takes to contact us.

Being able to understand my co-workers in the kitchen was important. But, when it comes to understanding the rights and responsibilities of employers and workers in Oregon, there is much more at stake than burned soup or spilled French dressing. Improving this understanding is important for all of us. We hope that you will help, and use the resources available here. ■

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. 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 others.

◆

Q Does Subdivision J, Control of Hazardous Energy – Lockout apply to vehicle maintenance?

A The lockout standard (Subdivision J) is a performance standard, and as such, is not intended to replace existing, specific lockout standards and procedures such as those in the vehicle standard (OAR 437-002-0223), the electrical standard (Subdivision S), the construction standard (1926.417), and other standards with specific lockout requirements. Rather, it is to support and supplement those standards that meet the performance objectives of the lockout standard. The lockout standard acknowledges that there are existing standards and procedures that address specific aspects of lockout for particular industries and areas of operation.

A company such as an automotive repair garage will need to have a written lockout program and provide training for employees. The company’s lockout program must set forth the procedures to be used when working on vehicles. In developing a program, the company would use the specific requirements for that work task, in this case, the requirements in OAR 437-002-0223.

In summary, you develop a company lockout program using the lockout standard in Subdivision J and supplement that program with specific requirements from OAR 437-002-0223.

Q I have several questions about ODOT workers doing roadway maintenance work in and around flooded streams, ditches, and other bodies of water near roads: Is there a specific standard that deals with working near — or even in — moving water during floods and storms? Are ring buoys or similar rescue devices required by the standard in such situations? Is a full running ditch considered a waterway? Does the PPE hazard as-

essment requirement apply to maintenance work involving high-water hazards that are not discussed in the standard?

A OAR 437-001-0760(1)(b) defines the requirements placed on employers to take all reasonable means to protect employees from hazards related to their work. This could include life jackets, harnesses, lanyards, or other means to prevent employees from being carried away by swift or deep water. Because storm and high-water conditions change rapidly, employees must be trained to assess each situation and select the proper equipment.

Whether a body of water is called a waterway or not is less important than protection from the hazard, and swiftness and depth are two crucial factors to consider. Depending on conditions, a ring buoy *could* provide adequate protection for employees. Under OAR 437-002-0139, U.S. Coast Guard-approved buoyant protective equipment is required if the water is more than five feet deep.

As to your question about the PPE hazard assessment requirement (1910.132), the answer is no. The PPE standard applies only to eye, head, face, and foot protections.

Q If my company operates a motor grader on rural gravel roads, does OAR 437-03-420 apply? If so, what traffic control procedures must we follow?

A Regarding your first question, yes. The use of a grader is covered by Division 3, Construction. This means that OAR 437-03-420, which requires compliance with the ANSI D6.1e-1989: Manual on Uniform Traffic Control Devices for Streets and Highways, is applicable.

In answer to your second question, 6B-22 of the 1989 MUTCD ordinarily allows the use of single or minimal combinations of warning signs when maintenance, such as blading, is performed on lightly traveled roads. The “Road Machinery Ahead” sign (6B-25) may be used in areas where heavy equipment is operating in or adjacent to the roadway. The “Road Work” sign (6B-26) should be used before maintenance or minor reconstruction operations while the “Shoulder Work” sign should be used before maintenance or minor reconstruction operations involving the shoulder. Normally, flaggers, pilot cars, protection vehicles, or other traffic control means are not required (6F-6) when blading along lightly traveled roads, because traffic is self-regulating.

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*.

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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"Grants," from page 12

Hewlett Packard

Will develop a special lift to reduce the risk of ergonomic injuries from lifting a 400-lb heater.

Gunderson

Will develop a mobile heavy-capacity scissors lift to prevent upper-extremity and lower-back injuries associated with handling heavy steel parts in awkward postures.

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Will develop durable ergonomic seating for drivers to prevent lower-back and upper-extremity injuries associated with ill-fitting or inadequate seats.

Questions?

Call the Worksite Redesign Team at (503) 378-3272. Additional information and an application packet are available on our Web site under the "Services" subject bar.

Questions?

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

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