

## Respiratory protection standard changed

By Chris Ottoson  
Health Enforcement Analyst, Oregon OSHA

Oregon OSHA's new respiratory protection standard took effect July 7, 1998. OSHA estimates the standard (29 CFR 1910.134) covers five million workers in 1.3 million workplaces. It applies to general industry, construction, agriculture, shipyard, longshoring and marine terminal operations.

The updated respiratory protection standard makes respiratory protection compliance easier for employers. The standard applies current respirator use and technology to worker protection. Requirements of the new standard are in a sequential order for ease of understanding, including a new section for definitions. OSHA's intent with the changes is improved worker protection and fewer illnesses and deaths from chemical exposures.

The standard doesn't apply to those workers occupationally exposed to tuberculosis, who are covered under 29 CFR 1910.139.

The new standard requires a written respiratory protection program when respirators are necessary to protect the health of an employee or when required by the employer. The written program must address worksite-specific procedures, including procedures for respirator selection and use; medical evaluations and fit testing; routine use and reasonably foreseeable emergency situations; maintenance; air quality; training about respiratory hazards and how to wear and maintain respirators; and regular evaluation of these procedures.

Voluntary use of respirators is addressed in the new standard. Employers must determine that use of a respirator won't pose an additional hazard to the wearer. Also, the wearer must be medically evaluated, and the respirator must be properly cleaned, stored, and maintained. A written respiratory protection program is not required for those employees who use only dust masks.

See "Respiratory," page 2

## Worksite redesign program benefits employers and employees

By Sharon Dey, Russell Frankel, and Mike Lulay  
Ergonomic Technical Consultants, Oregon OSHA

The purpose of the Worksite Redesign Grant Program is to help employers, employee groups, associations, unions, and educational institutions develop new and innovative solutions to workplace ergonomic, health, and safety problems that can't be resolved with off-the-shelf equipment or technology. The program awards project grants for two purposes. Research grants are for determining the specific causes of workplace problems, and for identifying the design of solution(s). These

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## “Respiratory,” from page 1

Information in Appendix D of the new standard must be provided in training employees who voluntarily use respirators.

OSHA requires that a “program administrator” run the respiratory protection program. This person must be qualified by training experience, or both, to oversee the program. No specific training program qualifies a program administrator. However, he or she must know work processes and respiratory hazards; be able to evaluate those processes and hazards; make proper respirator selection and explain respirator use; and work with a physician or other licensed health-care professional to determine which employees should wear respirators.

Respiratory protection must be NIOSH-certified. NIOSH previously certified respirators under 30 CFR Part 11 and now uses protocols defined in 40 CFR Part 84. Respirators available under either of these certifications can be used for the hazards for which they are approved. For particulate hazards, any N-, P-, or R-series respirators certified under 40 CFR Part 84 may be used for any size particulate. When another OR-OSHA standard requires use of high-efficiency particulate air (HEPA) filters, either HEPAs certified under 30 CFR 11 or the new N-100, P-100, or R-100 series respirators may be used.

Because chemical odor and irritation are inadequate as warnings to change chemical cartridges or canisters, the new standard limits the use of air-purifying respirators for protection against chemicals that produce either a gas or vapor. Instead, change-out schedules for canisters and cartridges used with respiratory protection against gases and vapors are now required. The purpose of this requirement is to ensure that “breakthrough” doesn’t occur and cause exposure. Alternatives to this requirement are to provide an atmosphere-supplying respirator or an air-purifying respirator equipped with an end-of-service life indicator (ESLI). Where ESLIs aren’t available, program administrators will have to develop change-out schedules to replace cartridges and canisters before the end of their service lives, based on worst-case information.

Medical evaluations are required before an employee is fit-tested or required to wear a respirator. The medical evaluation consists of either using an OSHA-mandated questionnaire (see Appendix C of the final rule) or having the employee receive an initial medical examination by a physician or licensed healthcare professional. Supplemental information regarding worksite-specific issues must be provided to medical personnel prior to determination of a person’s ability to wear a respirator.

Fit testing is required under the new standard. Fit-test protocols are detailed in Appendix A. There are two

types: qualitative fit test (QLFT) and quantitative fit test (QNFT). Both procedures have general requirements and step-by-step instructions.

## Use of respirators explained

The “Use of Respirators” section of the new standard covers face seal protection, continuing respirator effectiveness, procedures for Immediate Danger to Life and Health (IDLH) atmospheres, and interior structural firefighting. OSHA’s “Two-in, Two-out” rule for interior structural firefighting is explained in this same section. When an IDLH atmosphere must be entered, at least two employees must enter together and remain in visual and voice contact, and two employees must be located outside the IDLH atmosphere to initiate rescue procedures if needed. Self-contained breathing apparatuses must be used for interior structural firefighting.

Training is essential under the standard and must be provided at least annually. Changes in the workplace or employees’ apparent lack of skill or understanding about when to use respirators indicate a need for retraining or additional training.

To ensure that the written respiratory protection program remains effective, the employer must evaluate the workplace by consulting with employees, checking respirator fit and respirator effect on work performance, proper respirator selection for existing hazards, and proper use and maintenance of respirators.

New to the standard are recordkeeping requirements specific to medical evaluation and fit testing. Medical evaluations are considered medical records and must be retained under the provisions of 1910.1020, “Access to Employee Exposure and Medical Records.” Fit-test records include specific information that must be maintained until the next fit test.

The new rule changes semi-annual fit testing requirements to annual requirements for asbestos, arsenic, lead, and acrylonitrile. Cartridge/canister change-out schedules developed for the vinyl chloride, benzene, acrylonitrile, formaldehyde, and 1,3-butadiene standards are still in effect, based on extensive testing criteria. ■

This article is a summary of the highlights of the new standard. Please contact OR-OSHA for copies of the standard. You’ll find OR-OSHA phone and fax numbers in this newsletter.

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# Administrator's Message



*Peter De Luca*

Oregon OSHA has four new managers minding the store. I would like to take this opportunity to congratulate them on their selection, welcome them to their new positions, and personally thank them for accepting the challenges that come with their new duties.

John Hofer became the manager of OR-OSHA's appeals section in October of 1997. The appeals section conducts informal conferences when an employer appeals a citation from the division to determine whether a case can be resolved by OR-OSHA or must be sent to a formal hearing before an administrative law judge at the Workers' Compensation Board. Hofer worked on contested case hearings for SAIF Corporation and for the Bureau of Labor and Industries. He is a member of the Salem Hospital ethics committee, the Business Medical Ethics Group and the Coalition of Oregon Ethics Resources.

Both John and I view the appeals function as needing to be independent from enforcement. Because of this, John will report directly to me as part of the Administrative Office of OR-OSHA.

OR-OSHA's enforcement program boasts two new managers in recent months. Ron Drouin accepted the position of Safety Enforcement Manager in our Portland Field Office in May. Ron has worked for OR-OSHA, as a safety compliance officer since February of 1995. He previously worked 18 years for Gage Industries, a plastics manufacturer in Lake Oswego, as safety director. He was also involved in developing a training program on safe operation of plastic machinery now taught at Portland State University.

Craig Dutcher, a safety compliance officer for OR-OSHA since 1996, accepted the role of central regional manager in July. As such, he is responsible for coordinating the efforts of all the safety and health compliance officers in OR-OSHA's Salem, Bend, and Pendleton field offices. Craig has worked as a manufacturing plant manager and as a superintendent of research and development for the University of California Lawrence National Laboratory. He received a bachelor's degree in business from the University of New York and a master's degree in business with an emphasis in general management from John F. Kennedy University in Walnut Creek, California.

The most recent addition to OR-OSHA's staff is Cherie Ertsgaard. Cherie began her tenure at OR-OSHA as the manager of the Accident Investigation Unit in July. The Accident Investigation Unit thoroughly and expeditiously investigates workplace accidents that result in a fatality or in three or more people being hospitalized, with the goal of cause determination, so that similar incidents can be avoided in the future. Cherie has been a small business owner and has five years' experience in workers' compensation, including claims management, policy development and training. She has worked with many business groups, including the Association of Oregon Loggers and the Salem Home Builder's Association. She received a bachelor's degree from Willamette University with majors in mathematics and English.

I look forward to working with John, Cherie, Ron, and Craig and invite you, Oregon's employers and employees, to use the considerable expertise in this group to make Oregon's workplaces the safest and healthiest in the nation!

OR-OSHA has many dedicated individuals who truly believe in its mission. If you need help with a workplace safety or health issue, please do not hesitate to call one of our field offices. ■

A handwritten signature in black ink, appearing to read 'P. De Luca'.

*“Redesign,” from page 1*

grants may be for up to \$50,000. Development grants are for detailed design and implementation of prototype solutions. Development grants are available for up to \$100,000. Grant recipients are required to contribute ten percent of the project cost.

Product grants offering partial funding for the purchase of successfully-completed projects are also available. Product grants require from 5 to 50 percent matching contributions, depending upon the employer’s number of employees.

The Worksite Design Program is funded through the Workers’ Benefit Fund that contains employer assessments and employee contributions. The program has grown significantly since its inception two years ago. In 1997 six project grants

were awarded. During the fiscal year ending June 30, 1998, 18 employers and one association representing 1,500 employers received project grants. Awards to date total \$2,560,370.

During the most recent fiscal year, 61 Oregon employers with a total of 3,301 employees, representing 41 industrial classifications, received product grants. It is estimated that 1,085 employees’ work environments have been directly affected by these products.

Employers in the following industries are currently working on funded projects: agriculture, food processing, wood products, foundry, metal fabrication, construction, transportation, retail stores, manufacturing, education, health and residential

care, and emergency response. Examples of approved projects include: redesign of grocery checkstands, portable power sources for agricultural hand tools, non-slip floor surfaces, material handling devices, noise engineering controls, redesign of a bus driver’s seat, mechanical assists for welding jobs, and the redesign of an emergency response dispatch workstation.

For more information about the Worksite Redesign Grant Program, call Sharon Dey, Russell Frankel, or Mike Lulay at 1-800-922-2689 or 1-503-378-3272. Additional grant information and application materials are available on the OR-OSHA Web site at <http://www.cbs.state.or.us/external/osha/grants/grants.htm>. ■

## Accident Alert!

By Garnet Cooke  
Agriculture Health Officer, Oregon OSHA

### Lime sulfur reacts to form deadly hydrogen sulfide gas

An orchard worker was sent to a bulk chemical distributor to obtain a load of NPK 5-10-10 fertilizer. Two 325-gallon poly tanks, owned by the bulk distributor, were placed on the back of the worker’s flatbed truck. The orchard worker and an employee from the distributor began to fill the tanks. The orchard worker held the hose in the tank while the worker for the chemical company operated the controls. The orchard worker mentioned that there was a small amount, approximately 30 gallons, of lime sulfur in the bottom of the tank being filled and was directed by the chemical company worker to continue to fill the tank.

As the tank approached the half-full mark the orchard worker heard gas escaping and said to the other worker, “This doesn’t smell right.” He was having difficulty breathing. The other worker instructed him to switch places and jumped up on the

truck to hold the hose. He realized that the orchard worker was unconscious. The chemical worker secured the hose, shut off the pump, moved the orchard worker away from the truck and summoned emergency medical services. By the time they arrived the orchard worker was in convulsions. He was admitted into the hospital intensive care unit with respiratory failure, life-threatening metabolic acidosis, coma, and blood in his urine.

### Cause of the accident

The cause of the accident was found to be hydrogen sulfide poisoning, from mixing the lime sulfur with a fertilizer containing phos-

phate. At lower concentrations, hydrogen sulfide is detectable as the strong odor of rotten eggs. Higher levels produce olfactory fatigue so that the odor becomes less noticeable. Brief exposure to hydrogen sulfide at high concentrations can cause conjunctivitis and keratitis. Higher concentrations can cause unconsciousness, respiratory paralysis, and death. At high enough concentrations, one breath of hydrogen sulfide can kill. The

“immediate danger to life or health level” is 100 parts per million. The estimated level at the time of the accident, based on the symptoms experienced, was between 600 to 1,000 parts per million.

**DANGER**

**DO NOT MIX** { LIME SULFUR  
SOIL MEND  
SOIL MEND PLUS

**WITH ACIDS OR PHOSPHATE FERTILIZER PRODUCTS.  
DEADLY HYDROGEN SULFIDE (H<sub>2</sub>S) GAS  
MAY BE EMITTED.**

See “Alert,” page 5

# Information for You-2-Know

By Chris Ottoson  
Health Enforcement Analyst, Oregon OSHA

Year 2000, or Y2K, is the designation given to problems that result when computer chips identify dates ending in "00" as the year 1900 rather than 2000. For the occupational safety and health field, the widespread use of computer chips includes time/date tracking features in everything from handheld instrumentation to cameras and video recording devices, as well as data logging functions. Computer databases used for managing safety and health program activities, hazard communication information such as

material safety data sheets, continuous chemical exposure monitoring systems (e.g., ammonia, chlorine, or carbon monoxide detection), fire suppression systems, and other applications are also subject to Y2K compliance.

How can you handle Y2K compliance? Computer experts recommend that you make a detailed inventory of all your computer-chip-based equipment and systems. Contact equipment manufacturers for guidance regarding their equipment. Many manufacturers are receiving



calls about Y2K compliance and have developed responses for their clients. You shouldn't assume that equipment or systems are Y2K compliant. When reliable information isn't available, or when older equipment hasn't been tested, you will need to take steps to determine directly whether your equipment or systems are Y2K compliant. ■

## "Alert," from page 4

To prevent similar incidents from occurring:

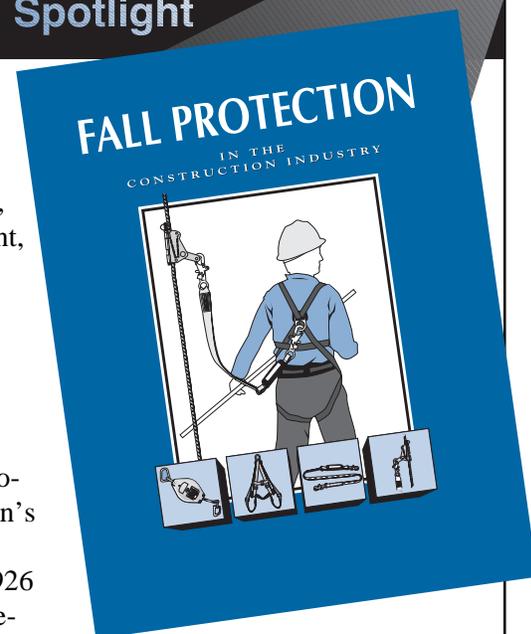
- Never place lime sulfur in a container that has not been cleaned (ideally, lime sulfur tanks should be dedicated)
- Ensure that all employees receive hazard communication training
- Never allow untrained employees to assist with mixing/loading lime sulfur
- Never reuse a lime sulfur container unless it has been cleaned according to manufacturer's specifications
- Ensure that an adequate emergency plan is in place ■

## A series of publications on fall protection is available

Fall protection is a concept that describes behaviors, systems, processes, procedures, equipment, and regulations used to protect workers from falls. The first publication in the series is *Fall Protection in The Construction Industry* (2824), a manual designed to help employers and workers understand what fall protection means in terms of Oregon's occupational safety and health rules, Division 3, particularly 1926 Subdivision M, fall protection requirements for the construction industry.

Additional titles in the series are *Fall Protection for Residential Type Construction* (2824A), *Fall Protection for Roofing Work* (2824B), *Fall Protection for Structural Steel Erection Work* (2824C), *Fall Protection for Rebar and Concrete Formwork* (2824D), and *Fall Protection, Responding to*

## Publication Spotlight



*Emergencies* (2824E).

For copies of these valuable publications, call the OR-OSHA Resource Center, 503-947-7447 or 1-800-922-2689 (V/TTY) or fax your request to 503-947-7463. The first copy of any OR-OSHA publication is free. There may be charges for additional copies. ■

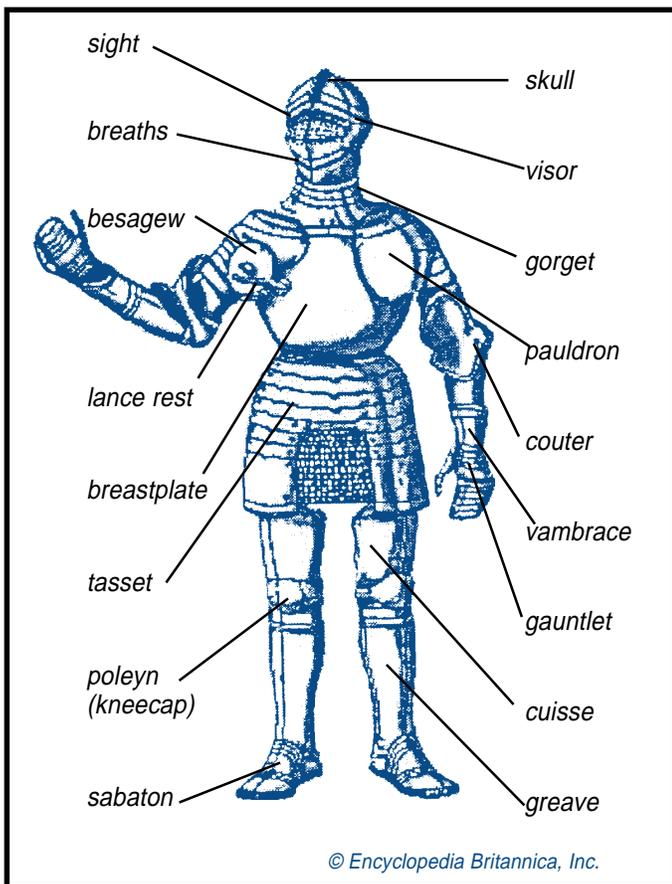
# The challenge of PPE

By Ellis Brasch  
Management Analyst, Oregon OSHA

## What is PPE?

PPE means “personal protective equipment.” It refers to what a worker wears for protection against a hazard. However, there’s no single definition that completely describes what PPE is or what PPE does. Here are a few examples of PPE definitions:

- any type of shield, barrier, restraint, or equipment applied to or worn by an individual for protection against exposure to a hazardous object, substance, condition, or environment
- specialized clothing or equipment worn by a worker for protection against a hazard
- devices and garments that protect workers from hazards
- clothing and accessories designed to create a barrier against workplace hazards
- anything that a worker can wear, carry, or use for protection against a work-related hazard



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The original PPE was body armour: protective clothing that deflected arrows, spears, lances, swords, and bullets. Modern PPE has evolved to protect workers against a variety of workplace hazards.

Not surprisingly, you’ll find PPE designed and marketed to guard workers against any conceivable hazard. Despite its widespread use, personal protective equipment is frequently misused. PPE offers appropriate protection for some tasks and no protection for others. Properly used, PPE protects workers against a hazard (or hazards) but it does not eliminate a hazard. If the equipment fails or is inappropriate for a particular task, the user risks exposure. Appropriate protection depends upon selecting, wearing, and using PPE properly; employers and employees share responsibility for these tasks. The table below shows the most common categories and types of PPE available.

## Common categories and types of PPE

PPE category	PPE type
Buoyant protection	Personal flotation devices (PFDs) such as life jackets and vests
Eye and face protection	Safety glasses, goggles, face shields, welding helmets
Head protection	Protective helmets such as hardhats
Foot and leg protection	Metatarsal guards, toe guards, foot and shin guards, safety shoes, leggings
Hand and arm protection	Durable work gloves, fabric/coated fabric gloves, chemical/liquid resistant gloves, insulating rubber gloves
Torso protection	Chemical protective clothing (CPC), Flame/heat resistant clothing, cooling vests, surgical gowns, jackets, aprons, full body suits
Hearing protection	Single-use earplugs, molded ear plugs, earmuffs
Fall protection	Full-body harnesses, body belts (only when used as part of a positioning system that limits falls to two feet)
Respiratory protection	Air-purifying respirators, atmosphere-supplying respirators, combination atmosphere-supplying and air-purifying respirators
Musculoskeletal (ergonomic) protection	Back belts and other devices marketed to prevent overexertion-type injuries

**Note: there is insufficient scientific evidence to prove that these devices prevent overexertion injury. OR-OSHA, therefore, does not recommend use of these devices among workers who have never been injured.** Use of these devices should not be mandatory.

See “PPE,” page 11

# SAFETY NOTES

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

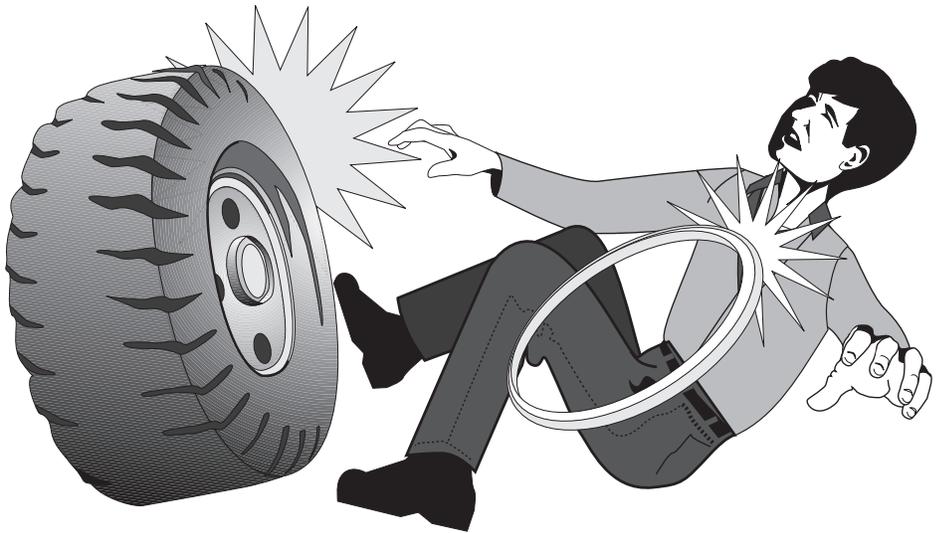
## Fatality Report

Accident type ..... Split rim explosion  
Industry ..... Rock quarry  
Employee job title ..... Laborer

### **Description of accident**

At the time of the accident, the victim, a laborer for a sand and rock company, was repairing a split-rim tire to be mounted on a dump truck. He had just completed patching the 22.5 inch tubeless tire and placed a tube in the tire. He had mounted it on a 20 inch split-rim wheel. The victim was working on the ground outside of the protective cage. The air chuck configuration provided by the employer put the victim in the blast zone. As the victim attempted to inflate the tire the innertube exploded, causing the tire assembly to strike the victim in the head.

The sound of the explosion brought other employees rushing to the scene. The victim was airlifted by Life Flight to the Oregon Health Sciences University Hospital where he died several days later of injuries related to this accident.



### **Investigation findings**

The employer did not provide appropriate training to employees in the hazards involved and the safety procedures to follow while servicing rim wheels. Rim manuals containing instructions for the type of wheels being serviced were not available in the service area at the time of the accident.

Additionally, the employer did not furnish or assure that employees use an air line assembly which includes a clipon chuck, an inline valve with a pressure gauge or a presettable regulator, and a sufficient length of hose between the

clipon chuck and the inline valve which would allow the employee to stand outside the blast zone while inflating tires on rim wheels.

The employee was allowed to air up a split-rim wheel with tire outside of the protective cage required for this task and within the blast zone, resulting in the death of the employee.

Had the employer provided adequate supervision, training, and appropriate equipment, this accident could have been prevented.

# SAFETY NOTES

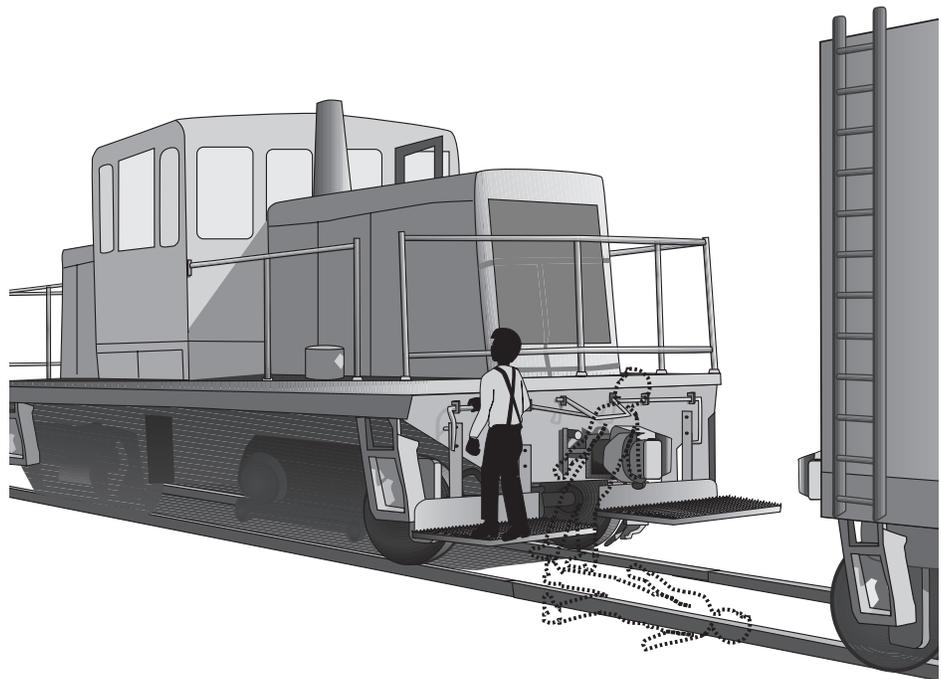
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## Fatality Report

Accident type ..... Run over by train  
Industry ..... Food processing  
Employee job title ..... Railroad switchman

### **Description of accident**

The victim performed switchman duties, coupling and uncoupling rail cars and signaling the locomotive operator. At the time of the accident, the switchman was standing on a 14.5-by-32-inch grated platform located directly over the rail track at the rear of the locomotive. He signaled to the locomotive operator, who turned to the front of the train and proceeded through the first two gear selections, causing the train to move forward slowly. As he moved into third gear, he turned and glanced backward. He saw the victim fall between the platform and the trailing-car wheel area. The operator stopped the locomotive and exited the train. He found the victim lying next to the track, dead of traumatic amputations. He called his supervisor, who contacted the local authorities.



### **Investigation findings**

The platforms used by switchmen had three open sides, providing no protection for riders while the train was in motion. Switchmen routinely rode the platforms, and were sometimes ordered by their supervisor to ride on the platform to observe the switches they were approach-

ing. The employees were not adequately supervised and instructed in safe riding procedures. Had the employer ensured the platforms were guarded with a standard railing as required by CFR 1910.23(3), this accident might not have occurred.

# SAFETY NOTES

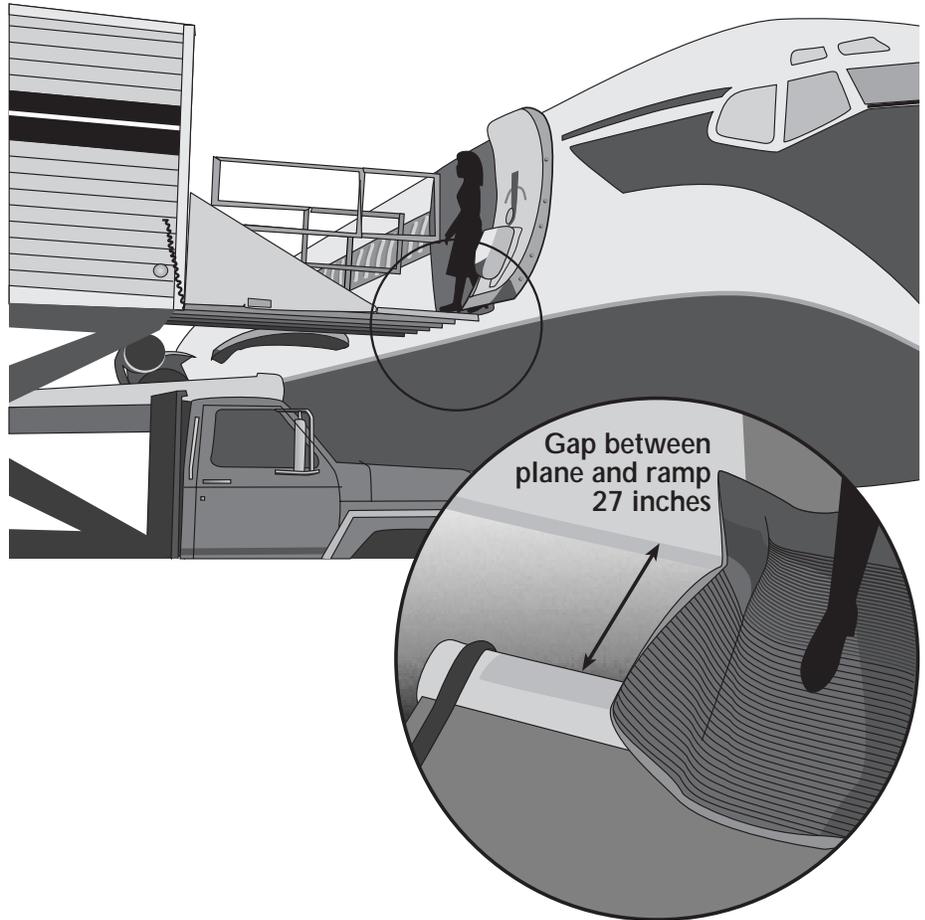
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## Fatality Report

Accident type ..... Fall  
Industry ..... Food catering  
Employee job title ..... Flight coordinator

### **Description of accident**

The victim was a flight coordinator whose employer contracted with airlines to provide food for flights. Her duties included ensuring that the correct products were delivered. A two-person catering crew performed the actual servicing of the airplanes. On the date of injury, the flight coordinator waited aboard the aircraft while a driver's helper guided the driver in positioning the truck at the rear of the airplane. Wheel chocks and outriggers were set and the truck box and platform were raised to the airplane door opening. The platform was approximately 27 inches from the door opening, so an 18-by-32-inch aluminum ramp was placed across the gap, with one end sitting on the rubber bumper of the truck platform and the other end extending approximately one inch into the door opening. When the flight coordinator started to walk across the ramp, it displaced, and she fell 14-feet, landing on her head and back. The victim died of head injuries 11 hours later.



### **Investigation findings**

Investigation revealed the platform used by the employees was not equipped with a railing and was not anchored to prevent slipping, as required by CFR 1910.23(c)(1) and CFR 1910.30(a)(2).

Under OAR 437-40-030, it was the employer's responsibility to

ensure the employees were properly instructed and supervised in the safe operation of equipment. If proper safety measures had been taken, this fatality would not have occurred.

# SAFETY NOTES

Department of Consumer & Business Services  
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Salem, OR 97310

## Fatality Report

Accident type ..... Crush injury secondary  
to tractor run over

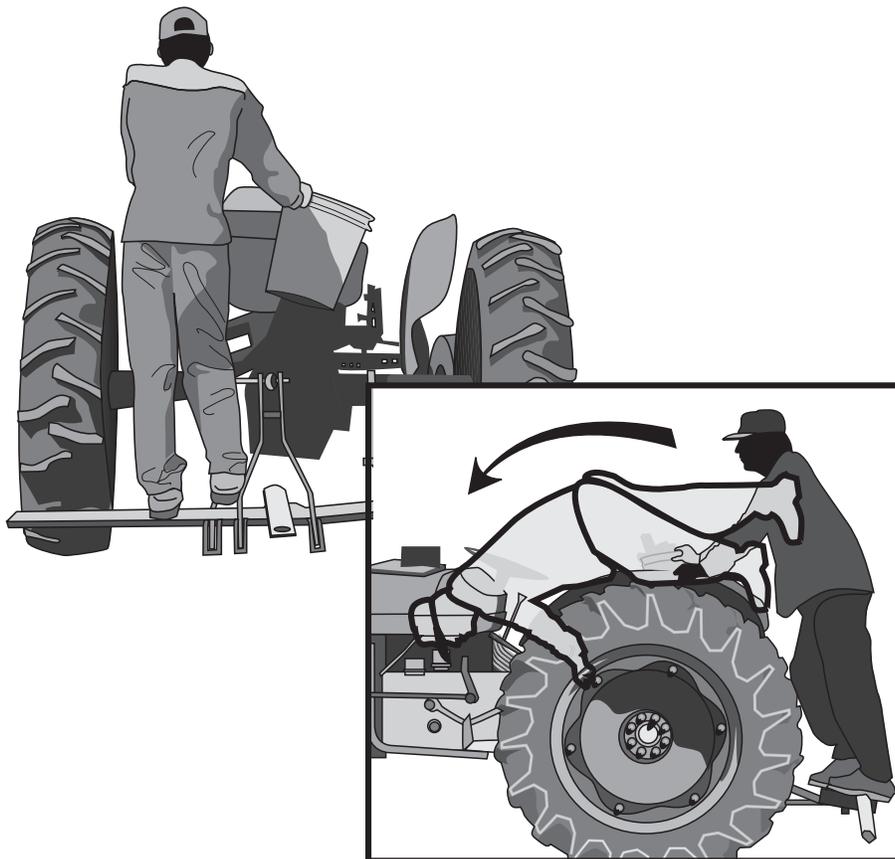
Industry ..... Farming

Employee job title ..... Farmhand

### Description of accident

The victim worked as a farmhand. Shortly before 6 p.m., he and a co-worker left the farm office to change irrigation pipes in the fields. They asked a tractor operator to give them a ride. The Massey-Ferguson tractor was equipped with only one seat, so the victim and coworker stood on the drawbar at the rear of the vehicle as they traveled.

The operator heard a scream, turned around, and saw that the victim had fallen and was being drawn under the tractor tire. He immediately stopped the tractor, but had already run over the farmhand. The tractor operator ran to the victim, covered him with a coat, and directed the other coworker to return to the office and call emergency services. The victim died at the scene before assistance arrived.



### Investigation findings

The investigation revealed it was common practice for employees to ride on the drawbar of the tractors. In addition, the tractor operator reported he was subjected to verbal abuse by co-workers if he refused to provide rides to and from the fields. Although the foreman and part-owner had observed workers riding on the drawbar of tractors, they did nothing to stop the practice beyond telling workers to stop the practice.

The company hadn't established a safety committee, although it employed more than 10 employees. The farm's incident rate was 9.3 compared to a 5.4 industry average.

Had the employer provided adequate supervision and enforced division rules that don't permit employees to ride on the drawbar of tractors, this accident could have been avoided. The employer was further directed to establish a safety committee.

## Where is PPE used?

All workplaces can expose workers to hazards. Workers use personal protective equipment in activities ranging from building construction to office work. You’re most likely to find workers using PPE in the following settings: general manufacturing industries, chemical manufacturing and process industries, emergency response work, hazardous waste and site cleanup, asbestos removal, and agricultural operations.

## When is PPE appropriate?

The traditional approach to controlling hazards advocates PPE only when engineering controls and administrative controls aren’t feasible. In theory, engineering controls *are* the most effective defense against hazards and administrative controls are the next choice. But there are environments, processes, operations, and tasks for which PPE *may* be appropriate. These include mobile jobs, frequently changing production processes, and temporary jobs.

When engineering controls are too expensive to implement, and administrative controls aren’t possible, PPE may be the only reasonable control method. However, work environments, processes, operations, and tasks change. PPE appropriate in the workplace now may not be appropriate in the future.

## Where can I find OR-OSHA’s requirements for PPE?

OR-OSHA’s general requirements for personal protective equipment are in Division 2, Subdivision I of the Oregon occupational safety and health standards. If you do not have a copy of the standards, please call the OR-OSHA Resource Center, 1-503-947-7447. OR-OSHA also has requirements governing the use of PPE in specific industries such as construction, longshoring, and forest activities.

## What’s challenging about PPE?

The challenge of injury prevention is finding effective solutions to problems that don’t have easy answers. PPE describes a seemingly endless list of products intended to protect workers against an equally long list of hazards. In some cases PPE is appropriate, in other cases it’s inappropriate. *The challenge of PPE is knowing when to use PPE, what PPE to use, and how to use it.*

- To know **when** to use PPE you need to know how to control workplace hazards. What control method is most appropriate for a particular task – engineering, work practice, or PPE?
- To know **what** PPE is appropriate, you need to know about the nature, type, and frequency of hazards to which workers are

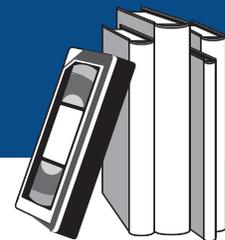
exposed. Other factors include where the PPE will be used, who will use the PPE, and under what conditions the PPE will be used.

- To know **how** to use PPE, workers must be trained. The type and scope of training depends on the type of PPE workers use. Whether they’re wearing hardhats or fully encapsulating suits, workers must know how PPE protects them and when it won’t protect them. Typical training issues cover PPE selection, wearing, use, maintenance, and disposal.

## Where can I learn more about PPE?

If you have specific questions about PPE requirements for your workplace, call OR-OSHA’s Standards and Technical Resources Section at (503) 378-3272. If you have Internet access, visit OR-OSHA’s Web page. You’ll find a fact sheet that answers common questions about PPE.

Federal OSHA also offers two useful PPE guides: *Assessing the Need for Personal Protective Equipment* (OSHA 3151), and *Personal Protective Equipment* (available on-line from federal OSHA’s Web page). *Best’s Safety Directory, 1998 Edition*, is also a good reference. Volume 1, Chapter 4 (pages 164-550) summarizes OSHA PPE requirements and includes a comprehensive equipment buyer’s guide.



## Safety training programs: Can't find them? Make them!

By Don Harris,  
AV Librarian, Oregon OSHA

At work, Uncle Louie was a machinist. At home, he was Mr. Fix-It. Even when his industry finally allowed him to retire, our family kept him hard at work with an endless succession of broken toasters, clocks, and other appliances, both large and small. I don't recall that he ever gave up, returned anything unmended, or said that anything was beyond hope. In many cases, repaired items were returned to the owner better than new.

One reason for his effectiveness was that when he didn't have an appropriate tool, he simply went to his workshop and created one. Over the years, he acquired an impressive array of specialized, one-of-a-kind implements of every conceivable shape and size.

When it comes to workplace safety and health, Oregon OSHA follows the same principle. If training materials aren't available for a specific industry or work process, or if available training materials don't exactly fit, they can be made to order.

Who makes them? You do! Any labor consortium, employer consortium, educational institution affiliated with a labor organization or employer group, or other non-profit entity in Oregon may apply for a grant from Oregon OSHA to produce workplace safety and health training programs. Grants of up to \$40,000 are available. Completed programs become the property of Oregon OSHA and are available for loan through the AV library. Grant programs are not copyrighted and can be duplicated by borrowers.

The Safety and Health Education and Training Grant Program was created by legislation co-sponsored by the AFL-CIO and Associated Oregon Industries. Since 1989, the program has awarded 47 grants totaling \$1.3 million, enabling the AV Library to gather its own array of specialized, one-of-a-kind tools for promoting occupational safety and health in Oregon. The "grant collection" contains programs on veterinary medicine, workplace violence, back injury protection for nurses, emergency planning for first responders, wheat farming safety, and many more subjects.

Grants are awarded twice a year. Applications for the current round of awards are due to Oregon OSHA

September 10, with grants to be awarded in October. The last grant round for the biennium will be in April of 1999.

The next time you're faced with a training assignment, and you can't find materials that fit, try looking through the "grant collection" on Page 13 of the *1998 OR-OSHA AV Library Catalog* (available on request). If you still can't find anything, remember Uncle Louie. It just might be time to create a new tool.

If you have questions about the Oregon OSHA audiovisual library, please contact Don Harris by phone, 1-503-378-3272; fax, 1-503-947-7463, or e-mail, [don.j.harris@state.or.us](mailto:don.j.harris@state.or.us). ■

### Grant programs available to loan

The following programs from the "grant collection" are available for scheduling:

An Ounce of Prevention (#432 and #434)

*Sponsor: Oregon Veterinary Medical Association*

EPA Worker Protection Standards For Orchard Workers (#464)

*Sponsor: Hood River Grower/Shipper Association*

Load & Lift: A Guide to Agricultural Lift Truck Safety (English #467, Spanish #468)

*Sponsor: Oregon Association of Nurserymen*

Safety First – Pictograms for the Food Processing Plant (English #414, Spanish #416)

*Sponsor: Northwest Food Processors Association*

Service Worker Safety Training – Occupational Violent Crimes (#424)

*Sponsor: Oregon Coalition Fund*

Workers Exposed – Bloodborne Pathogens Training for School & Service Workers (English #420, Spanish #422)

*Sponsor: Service Employees International Union (SEIU)*

# Upcoming Conferences

September 9-11

Central Oregon  
Community  
College, Bend

Co-sponsored by  
Oregon OSHA and  
the Central Oregon  
Safety & Health  
Association



“Leadership and Managing Change” is the theme of this year’s conference. The blockbuster session on Thursday afternoon will energize you while addressing motivation and managing change. This conference will inspire and leave you with a thought-provoking message that will challenge you to strive for personal growth and professional excellence. The programs designed for this conference offer broad-based information for managers, supervisors, and safety committee members.

**Sessions include the following:** Improving Safety Committee Effectiveness; Constructive Confrontation; Confined Space Entry; Total Quality Management and Changing Corporate Culture; Ergonomics Highway; Hazard Identification and Control; Addressing Domestic Violence Through the Workplace; Tuberculosis Management; Safety and Health Program Evaluation; Respiratory Protection; Combating the Deadly Back-injury Cocktail: Physical and Psychological Stress; Assessing and Managing Employee Exposure; Wire Rope, Slings and Lifting Attachments; and Now, Put Your Presentations to Work!

## Southern Oregon Occupational Safety & Health Conference

October 13-14

Smullin Center, Medford

Co-sponsored by Oregon OSHA  
and the American  
Society of Safety Engineers,  
Southern Oregon Chapter



Get the latest information from in-depth, half- and full-day workshops on occupational safety and health issues affecting labor and management, as well as the opportunity to exchange information and ideas with other safety and health professionals. Exhibitors will display state-of-the-art ergonomic equipment, software, and training programs.

**Sessions include the following:** Violence in the Workplace; Accident Investigation for Safety Committees; Scaffold Safety; Behavior-based Safety Leadership; Hazard Assessment; Fall Protection; Safety Committees: Real-world Frustrations and Solutions; Required Written Safety and Training Programs; Emergency Action Planning; Oregon OSHA Inspection Process; Record-keeping; What is VPP? An Introduction to the Basics and Benefits; Constructive Confrontation; Machine Guarding and Hand Tool Safety; Indoor Air Quality; Drug Abuse and Recovery in the Workplace; and Wellness, Industrial Therapy, and Stretching.

## Oregon Pulp & Paper Workers Safety & Health Conference

December 1-4

Eugene Hilton, Eugene



This conference is a joint effort of Oregon OSHA and the Oregon Pulp & Paper Workers Council of AWPPW, in cooperation with IBEW, UPIU, LERC, CROET, Washington Safety Council of AWPPW, and WISHA (Washington Industrial Safety & Health Administration).

The conference planning committee has been hard at work designing a program to meet the needs of safety committee members, labor safety representatives, mill managers, safety directors, safety and health professionals, and emergency response teams in the pulp and paper industry. The highlight of this year’s program is the keynote presentation, “Safety is Everyone’s Responsibility,” by Charlie Moorecraft. This is a highly personal look at what happened to one man and his family, and how it could happen to any of us if we abuse or ignore safety practices.

**Sessions include the following:** Hazard Identification and Mill Tour; Benchmarking Organizational Culture in the Safety Improvement Process; Industrial Hygiene Issues; Principles and Applications of Ergonomics in the Pulp & Paper Industry; Safety and the Supervisor; Mobile Equipment Safety; Safety Committee Training; Fall Protection; Incident/Accident Investigation; Trenching and Shoring; Leadership: Safety and Ethics; Proactive Strategies to End Violence in the Workplace; Safety Video Production; CPR/First Aid Training; and a 2½ day workshop especially designed by and for emergency response teams.

See “**Conferences,**” page 14

# 1999 Oregon Governor's Occupational Safety & Health Conference

March 8-11, 1999

Oregon Convention Center, Portland



## Leadership into the millennium...

Planning is underway for the big event! Exhibitor application and award nomination packets are available, and we're adding names to the list for registration materials that will be mailed in January 1999. Keep looking for more information in future *Resource* publications, industry trade journals and newsletters, and on our Web site.

For more information on these conferences, contact Oregon OSHA's Conference Section at (503) 378-3272 (V/TTY), or (toll-free) at 1-888-292-5247, option 1. E-mail us at: [oregon.conferences@state.or.us](mailto:oregon.conferences@state.or.us) or visit our Web site at: <http://www.cbs.state.or.us/external/osha/educate/confer.htm> ■

## 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.

OR-OSHA cannot require the employer to pay for such physicals.

**Q Can an employer maintain one complete set of Material Safety Data Sheets (MSDS) in a central location, instead of maintaining sets in several different departments?**

**A** An employer can maintain a complete set of MSDSs in one location as long as employees have access to them whenever necessary.

**Q Is fall protection required for workers who stand on top of booms (six to ten feet above the ground) for brief periods of time to connect or disconnect pendants during the assembly or dismantling of mobile cranes?**

**A** The tasks described in your question fall under the scope of Division 2, General Industry, Subdivision I, Personal Protective Equipment. The "note" following OAR 437-002-0125(1) applies. It states that the requirements for fall protection for employees working on unguarded surfaces more than 10 feet above a lower level or at any height above dangerous equipment do not apply when work is of a limited duration and limited exposure, and the hazards involved in rigging and installing the safety devices equal or exceed the hazards involved in the actual activity. Thus, fall protection is not required for trained workers who must climb onto the top of the boom for a short period of time to connect or disconnect pendant lines or perform related work.

**Q Please define the term "make available" as used in paragraphs (j)(2)(l) of 1910.1025, the lead standard.**

**A** Employers who have employees that are exposed to lead above the action level for more than 30 days a year must implement and maintain a medical surveillance program.

Biological monitoring must be included as part of the medical surveillance program. The term "make available" means that the employer must ensure that employees are provided the opportunity to participate in the company's medical monitoring program on company time, at no inconvenience or cost to the employee.

An employer cannot make it mandatory for employees to participate in the company's medical monitoring program. Also, the employee is not required to see the company physician and may choose to use their own physician. If an employee chooses to use their own physician,

See "Ask," on page 16

# 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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Information requests should be directed to:  
Jani Johnston, Editor,  
at (503) 378-3272 (V/TTY)  
or 1-800-922-2689.

### Department of Consumer & Business Services

Michael Greenfield, Director

### Oregon OSHA

Peter De Luca, Administrator

### Editor

Jani Johnston

### Design and illustrations

Pam Piesker

### Technical editing

DCBS Communications

## RESOURCE

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## 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).

Whenever feasible, it is recommended that alternative work practices be used, such as using line trucks to pull the pendant lines out, or using a flatbed truck, ladder, scaffolding or some other safe means to reach the top of the boom. If unprotected exposure for a brief time is allowed on top of a boom, movement must be limited to a minimum. When moving from one location on the boom to another, the worker must climb down to the ground or onto a safe walking surface and must never walk along the unprotected top of the boom. When on top of the boom, the worker should keep his center of gravity as low as possible and use as wide a standing surface as is available. The fall distance from the base of the boom can be reduced by doing as much work as is possible from directly over the truck part of the crane. ■

### 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:*  
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Oregon Occupational Safety & Health Division  
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