

Health and Safety

Volume 37— online

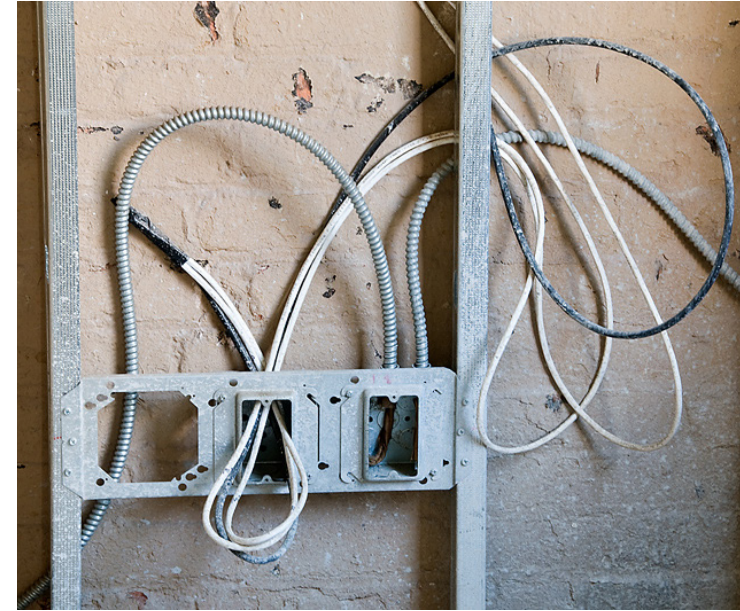
# RESOURCE



*Oregon***OSHA**  
August-September 2014

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Electrical hazards are a concern for more than just electricians.

**On the cover:** Find out what electrical violations are common in Oregon.

## RESOURCE

### Oregon Health and Safety Resource

is published every other month by the Oregon Occupational Safety and Health Division of the Department of Consumer and Business Services.

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# 'Temporary' workers have permanent lives

By Michael Wood

Temporary workers have been in the news lately – and that's a good thing. Both federal OSHA and the national American Society of Safety Engineers (ASSE) have launched initiatives to address the real risks created when an employee effectively works for two different employers at the same time.

Where the employer of record is different from the employer controlling the worksite, I believe both "employers" have a legal responsibility to protect those workers. Federal OSHA has sent signals that it is seeking to hold both employers accountable for the responsibilities that they should be fulfilling. That, I think, is good news. But it leaves a question as to exactly what those responsibilities should be – ASSE and other organizations are focused on "best practices," but we know that for some employers, an understanding of their legal obligations will always drive their actions more than what the best in the industry have found to be effective.

For me, the question is relatively straightforward in concept, although it can be more complicated in specific circumstances. If you work for me I am responsible for your safety. And if you work under my supervision and control, I am responsible for your safety.

When the employer of record sends employees to someone else's worksite to

work under someone else's control, that employer still has a legal responsibility to protect the workers from hazards about which the employer knew or should have known. That is, I believe, existing law. And unreasonable ignorance of what those employees actually will be doing does not provide any excuse.

As to the employer who supervises the day-to-day work, when an employer takes on the responsibility of supervising an employee's day-to-day work, then that employer is responsible for worker safety as well. That is, I believe, also existing law.

It can work well when both employers step up to the plate. Unfortunately, they do not always do so. Problems arise when one employer acts as if it is really just a payroll company in practice. The on-site employer may believe safety is not its problem because the employee is not its employee. So the worker – unusually vulnerable to and fearful of retaliation precisely because of the tenuous employment relationship – has no one looking out for him or her.

Unfortunately, this is not an academic issue. Many of the really egregious abuses of worker safety I have seen in 20 years or so in the business involved such a dual employer situation that was viewed by both employers as "it's not me – it's him!"



The best model is one that acknowledges a slight overlap in responsibility. It is important that there not be a gap through which workers and their safety are allowed to fall. The employer of record can and should be held accountable for training, basic equipment, etc. (either to provide it or to arrange for it). But responsibility for breakdowns in supervision or on-the-job work practices has to fall to the host employer. At the same time, the employer of record cannot be allowed to wash its hands of supervisory breakdowns of which it is (or clearly should be) aware. "It's not my job, I'm not on site" is at least as dangerous a mantra as "it's not my job, they aren't my employees." Again, the best employers understand this. The question is how to handle those who do not.

Can we always bring our legal tools to bear on the employers who start by explaining what they don't have to do? Maybe not. But we can try.

A handwritten signature in black ink, appearing to read "Michael Wood".





# Shock wise

## Handling electricity with care

By Melanie Mesaros

In 2007, a teen working at a Portland pizza chain walked into a cooler to get dough and found the trays were stacked near the overhead fluorescent light fixture. The tray he reached for hit the light tube, dislodging it, and the employee then went to replace the bulb. The worker had one side in the fixture and his fingers on the prongs, attempting to guide the bulb in the other end, when he received an electrical shock. It was severe enough to result in an overnight hospitalization.

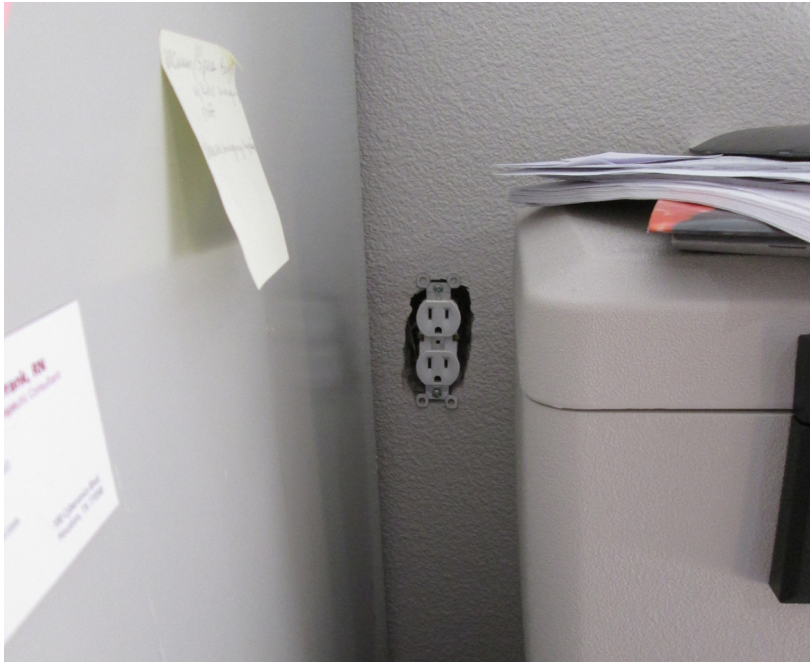
Employers may overlook electrical hazards like this because they assume simple tasks don't pose a risk. Its force is unheard and unseen.

"It doesn't mean you have to have a license to change a light bulb, but you really need to know what you're doing when it comes to electricity," said Ron Haverkost, Oregon OSHA's Salem field office enforcement manager. "It's the reason Oregon OSHA puts such an emphasis on training individuals to know what's expected of them. It doesn't take a lot of voltage to penetrate human skin."

Continued on page 5

An electrician suffered serious burns after an arc flash incident in 2013.

Photo credit: Tim Marcum, Oregon OSHA



**Left:** Missing cover plates, such as this one at a Cornelius business, are a top electrical violation.

**Below:** The aftermath of a burned-out meter following a Portland arc flash incident.

Photo credit: Alba Johnston, Oregon OSHA

## Do you work in one of these industries?

The following trades are most at risk of an electrical incident

- Carpenters
- Masonry and cement workers
- Auto technicians and mechanics
- Electricians
- Janitors
- HVAC installers and sheet metal workers
- Tree trimmers/landscaping
- Food manufacturing
- Millwrights
- Maintenance and general repair workers
- Painters
- Crane and heavy machinery operators
- Roofers
- Truckers
- Telecommunications installers
- Welders

Source: Central Services Division, Oregon Department of Consumer and Business Services

Over the past three years, Oregon OSHA cited about 1,800 electrical violations. The most common include violations for missing cover plates, unused openings, and missing ground prongs.

Unlike a fall from a roof, which is an obvious hazard for construction crews, Roger Dale-Moore, safety manager at general contractor S.D. Deacon, said missing cover plates are a constant concern, too.

“Different tradespeople will take the cover plates off electrical boxes and switches to do finish work,” Dale-Moore said. “The probability you could say, in some cases, is low for exposure but the severity is high because it’s electrical. We now use a temporary plate that allows the work to continue.”



Photo credit: Tim Marcum, Oregon OSHA



Complacency about the power of electricity can even be an issue for licensed electricians. In 2013, Oregon OSHA investigated an accident in which a long-time utility employee was severely burned following an arc flash incident. The worker was installing a meter that was fully energized and he had removed his face shield.

**“WHETHER IT’S CHANGING OUT A LIGHT BULB OR WORKING ON COMPLEX ELECTRICAL SYSTEMS, YOU NEED TO RECOGNIZE WHAT ELECTRICITY DOES AND WHY IT DOES IT.” – Ron Haverkost**

“The past culture of the electrical trade and those folks who have been doing it for 20-plus years has left many to believe they’re invincible,” said Haverkost. “They already know they are going to get shocked and they live with that attitude. The culture shift has been slow in coming for people who have been doing it for a while.”

However, new electricians are now receiving more safety-related training in their trade. The National Fire Protection Association 70E is a standard specific to electrical safety on the job and is a key part of training received by apprentices and journeymen.

“They are better informed on the hazards that exist today,” said Haverkost.

Electricity, present on every jobsite, makes all employees vulnerable.

“Whether it’s changing out a light bulb or working on complex electrical systems, you need to recognize what electricity does and why it does it,” said Haverkost. “Regular training is critical when it comes to preventing incidents.”

## Oregon OSHA’s top electrical standards

### Cover plates

- 1910.305(b)(2)(i)

### Grounding

- 1910.304(g)(5)
- 1926.404(8)(6)
- \*Construction standard

### Unused openings

- 1910.303(b)(7)(i)
- 1910.305(b)(1)(ii)



Training workers on electrical hazards can prevent a serious injury.



Photo credit: Roger Dale-Moore, S.D. Deacon

**Above:** Temporary faceplates are used by workers at S.D. Deacon to avoid shock hazards.

# Low-voltage electricity

By Ellis Brasch

A series of unfortunate events that caused the **2007 death of a Florida construction worker** show that even 120 volts can kill you in seconds. The medical examiner's report in the case also raises a question: What is low voltage?

## The electrocution: 'Worker dies after electric shock from faulty cord'

The worker was standing on a plastic bucket using a refurbished, double-insulated saw to cut holes in the Sheetrock ceiling of a home under construction. The saw's power cord, which had an inadequate splice in it, was plugged into a 120-volt extension cord and the extension cord was plugged into a power strip. The power strip was connected to a series of three extension cords that went to an outlet in the house next door, which was equipped with a ground-fault circuit interrupter. However the grounding pins in the three extension cords between the power strip and the outlet were missing.

The worker draped the 120-volt extension cord that powered the saw around his neck so that the plug was resting on the left side of his chest. It was a hot day, and he was sweating.

A witness heard the worker yell and saw him throw off the saw and cord. The worker stepped off the plastic bucket, took two steps, and collapsed. He was rushed to a local hospital where he was pronounced dead.

The electrical shock he received was not enough to leave burn marks on his body, but it disrupted the rhythm of his heart. The medical examiner's report listed the cause of death as acute cardiac dysrhythmia due to low-voltage electrocution.

## How the electrocution happened

### *The saw's power cord had an inadequate splice in it.*

Although the saw was double insulated, it would not protect the worker from the defective power cord. The "inadequate splice" in the power cord most likely was the energized conductor that allowed the current to flow through the worker's body. However, the fact that the current passed through the worker's body was a necessary — but not a sufficient — condition to cause the electrocution.

### *The three extension cords between the power strip and the outlet were missing their grounding pins.*

The missing grounding pins in the cord sets meant that the cord sets were not grounded. Because electricity always seeks a path back to its source, the only remaining path for the current was through the worker's body.



### *The worker draped the 120-volt extension cord that powered the saw around his neck so that the plug was resting on the left side of his chest.*

The path that electricity takes through the body affects the degree of injury. If the electricity passes through a person's chest cavity (from one hand to another, for example) the person is more likely to be electrocuted or receive a severe shock.

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## Low-voltage electricity – continued

### *It was a hot day, and he was sweating.*

The presence of moisture from standing water, wet clothing, high humidity, or perspiration increases the possibility of an electrocution. The level of current passing through the human body is related to its voltage and to the resistance of its path through the body, which can be expressed in units called **ohms**. Under dry conditions, the resistance offered by the human body may be as high as 100,000 to 300,000 ohms per square centimeter. Wet or broken skin may drop the body's resistance to 1 percent of that range, increasing the risk of a severe shock.

### *The electrical shock he received was not enough to leave burn marks on his body, but it was enough to disrupt the rhythm of his heart.*

Thanks to **Ohm's law**, which describes the relationship between current, voltage, and resistance, it is possible to estimate the amount of current that passed through the worker's body: about 200 milliamps. Current between 100 and 200 milliamps causes ventricular fibrillation, but is generally not strong enough to cause burns. However, once fibrillation starts, death can happen quickly. (If the current that passed through the worker's body was 200 milliamps, he could have been electrocuted in less than one second.)



### **What is low voltage, anyway?**

Low voltage is a term that everyone seems to understand – until you ask them to explain it. The National Electrical Code (NEC), the standard for safe electrical practices in the United States, does not define it and Oregon OSHA's rules for electrical work leave the term open for interpretation. For example, Oregon OSHA's general industry rules require "live parts of electric equipment operating at 50 volts or more" to be "guarded against accidental contact" while "rooms, or enclosures containing exposed live parts or exposed conductors operating at over 600 volts, nominal" must have signs that say "Danger – High voltage – Keep out." So, low voltage could be 50 to 600 volts, which has little educational value.

**Remember:** It is not necessarily the number of volts that will electrocute you (voltage is the force that causes electricity to flow through a conductor), but the amount of current, its path, and the time it takes to pass through your body.

### **Electric current and its effect on the human body**

- ⚡ 1 milliamp (mA) or less – no sensation – not felt (1,000 milliamps equal 1 amp)
- ⚡ 3 mA or more painful shock
- ⚡ 5 mA or more – local muscle contractions – 50 percent cannot let go
- ⚡ 30 mA or more – breathing difficult – can cause unconsciousness
- ⚡ 50–100 mA – possible heart ventricular fibrillation
- ⚡ 100–200 mA – certain heart ventricular fibrillation
- ⚡ 200 mA or more – severe burns and muscular contractions – heart more apt to stop than fibrillate
- ⚡ Over a few amps – irreversible body damage

**Source:** "A guide to electrical safety," North Carolina Department of Labor, 2012

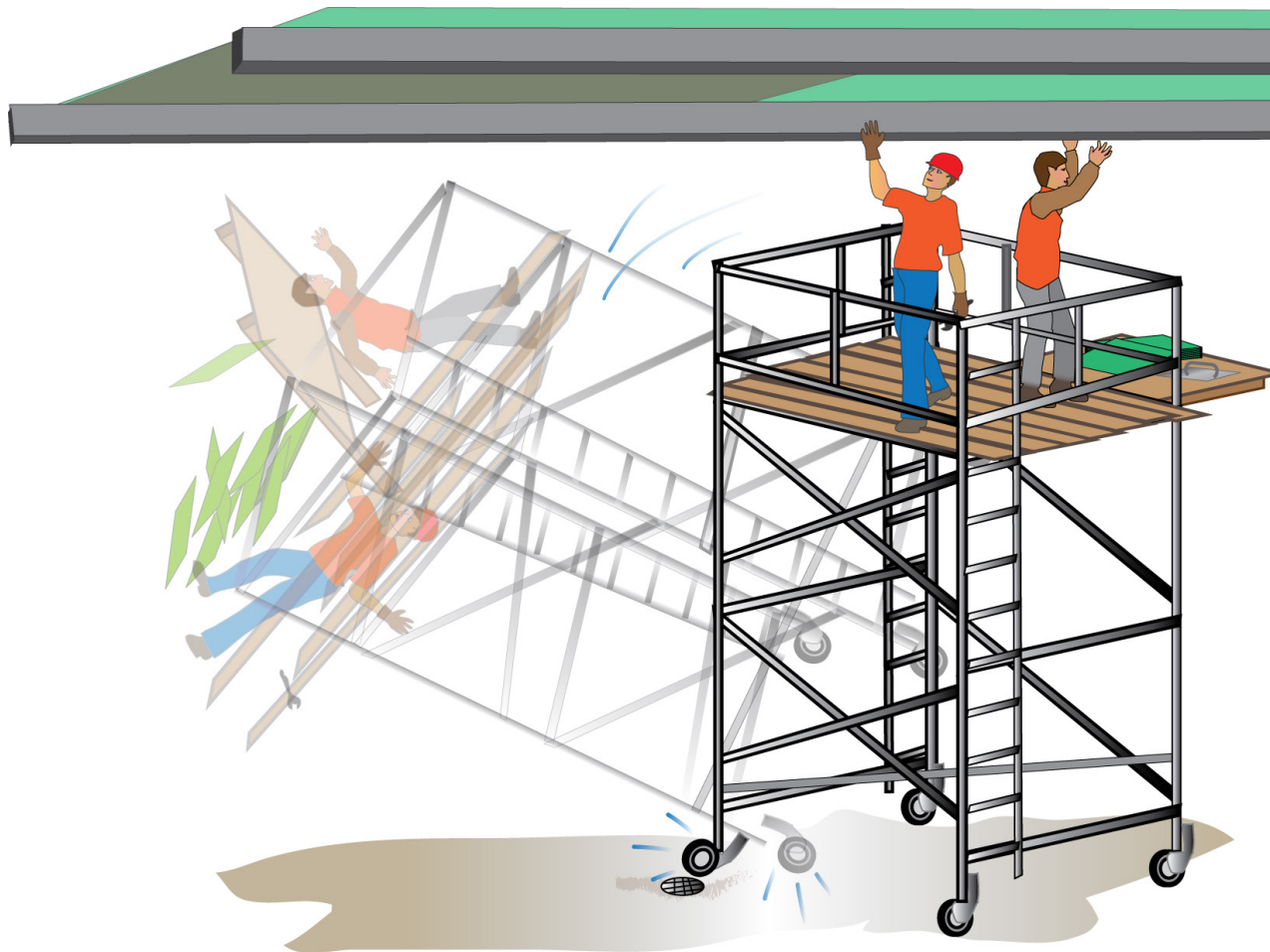


## Accident Report

**Incident** | Mobile scaffold tips over

**Business** | Property management

**Workers** | Two construction workers



Two workers, standing on a mobile scaffold 17 feet above a cement floor, were installing acoustic tile and insulation to the ceiling of a commercial building. The scaffold's wheels and casters were unlocked and the scaffold platform, which was modified to store materials, extended about three feet past the base. The top guardrail was 35 inches above the platform and did not have a mid-rail.

The cement floor was uneven and there were two drain holes,  $\frac{3}{4}$ -inch and  $1\frac{1}{2}$  inches below the surface.

While they were on the scaffold, the workers began to move it forward by pulling on the ceiling beams. As they were moving the scaffold, one of the caster wheels came off and the scaffold tipped over.

A neighbor heard the scaffold fall and called for help. Emergency responders arrived and took the workers to the hospital. One worker had surgery to repair a torn vein in his stomach and was hospitalized overnight. The other worker had his L-2, L-3, and L-4 vertebrae fused and spent more than 10 days in the hospital.

Continued on page 10



Loose casters and an uneven floor led to the scaffold tipping over.



One of the two drain holes in the floor was 1½ inches below the surface.

### Violations

**1926.451 (g)(1)(iv):** Employees on a self-contained adjustable scaffold must be protected by a guardrail system when the platform is supported by the frame structure.

**1926.452 (w) (6)(ii):** The height to base-width ratio of the scaffold while it is moved must be 2 to 1 or less unless the scaffold is designed and constructed to meet nationally recognized stability test requirements such as those listed in ANSI/SIA A92.5 and A92.6. (The scaffold's height to base width ratio was 3.47:1.)

**1926.452 (w)(2):** Scaffold casters and wheels must be locked with positive wheel locks or wheel and swivel locks.

**1926.452 (w)(3):** Manual force used to move the scaffold must be applied as close to the base as practicable, but not more than 5 feet above the supporting surface.

**1926.452 (w)(6)(i):** The surface on which the scaffold is being moved must be within three degrees of level and free of pits, holes, and other obstructions.

**1926.452 (w)(7):** Platforms must not extend outward beyond the base supports of the scaffold unless outrigger frames or equivalent devices are used to ensure stability.

**1926.452 (w)(9):** Caster stems and wheel stems must be pinned or otherwise secured in scaffold legs or adjustment screws.

**1926.454 (a):** Employees were not trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used.

**437-001-0760(a):** Employees were not properly supervised in the safe operation of the scaffold.

**437-001-0765 (13):** The employer did not have written records of safety meetings.

## Outdoor workers at risk as temperatures climb

Landscaping, construction, and agriculture are some of the outdoor jobs that can expose workers to dangerous high heat. Labor-intensive activities in hot weather can raise body temperatures beyond the level that normally can be cooled by sweating and may lead to heat exhaustion or heat stroke.

Oregon OSHA encourages employers and workers to learn the signs of heat illness and take precautions. A person overcome with heat exhaustion will still sweat, but may experience extreme fatigue, nausea, lightheadedness, or a headache. The person could have clammy and moist skin, a pale complexion, and a normal or only slightly elevated body temperature. If heat exhaustion is not treated promptly, the illness could progress to heat stroke, and possibly even death.



“Water, rest, and shade are the three things to remember,” said Penny Wolf-McCormick, health enforcement manager for Oregon OSHA. “Employers should ensure workers are taking water breaks throughout the day and provide shade to give their body time to recover.”

From 2009 through 2013, 33 people received benefits through Oregon’s workers’ compensation system for heat-related illnesses.

“Many Oregon workers aren’t used to this type of heat and may need time to acclimate,” Wolf-McCormick said.

To help those suffering from heat exhaustion:

- Move them to a cool, shaded area. Do not leave them alone.
- Loosen and remove heavy clothing.
- Provide cool water to drink (a small cup every 15 minutes) if they are not feeling sick to their stomach.
- Try to cool them by fanning them. Cool the skin with a spray mist of cold water or a wet cloth.
- If they do not feel better in a few minutes, call 911 for emergency help.

Certain medications, wearing personal protective equipment while on the job, and a past case of heat stress create a higher risk for heat illness.

Heat stroke is a more severe condition than heat exhaustion and can result in death.

Immediately call for emergency help if you think the person is suffering from heat stroke.

Here are some tips for preventing a heat-related illness:

- Perform the heaviest, most labor-intensive work during the coolest part of the day.
- Use the buddy system (work in pairs) to monitor the heat.
- Drink plenty of cool water (one small cup every 15 to 20 minutes).
- Wear light, loose-fitting, breathable clothing (such as cotton).
- Take frequent short breaks in cool, shaded areas – allow your body to cool down.
- Avoid eating large meals before working in hot environments.
- Avoid caffeine and alcoholic beverages (these make the body lose water and increase the risk of heat illnesses).

Employers can calculate the heat index for their worksite with the federal OSHA heat stress app for mobile phones. The tool is available at [www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](http://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html). A number of other tools are available at [www.osha.gov/SLTC/heatillness/index.html](http://www.osha.gov/SLTC/heatillness/index.html).

Oregon OSHA also has a pocket-sized booklet available, in both English and Spanish, with tips for working in the heat: [www.orosha.org/pdf/pubs/4926.pdf](http://www.orosha.org/pdf/pubs/4926.pdf) (English version).



# Oregon OSHA files amendments to confined space rule

Oregon OSHA published amendments to its proposed confined space rule (OAR 437-002-0146) to clarify employer obligations and eliminate confusing requirements.

The rule was adopted in 2012 to address confined space hazards for the construction industry, as the previous rule, OAR 437-002-1910.146, did not apply to the construction industry. However, in September 2013, Oregon OSHA received questions about certain provisions of the rule and their effects on the industry. Oregon OSHA

concluded there was enough substance to those concerns to justify reconvening a stakeholder group to address them. Language clarifications, definitions, and rule exceptions are part of the proposed changes that would take effect Jan. 1, 2015.

Oregon OSHA will accept comments on the proposed changes at a public hearing Aug. 25, 2014, at 10 a.m. at Portland General Electric, 4245 Kale St. NE in Salem. For more information, go to [www.orosha.org/pdf/notices/proposed2014/ltr-div2j-confined-space.pdf](http://www.orosha.org/pdf/notices/proposed2014/ltr-div2j-confined-space.pdf).



# Oregon OSHA offers workplace safety training grants

Grant funding is available to develop innovative workplace safety and health training programs. Oregon OSHA will sponsor projects that may range from a unique mobile app to an online educational game that engages workers.

The grants will focus on programs that target an Oregon industry or a specific work process to reduce or eliminate hazards. Any employer or labor consortium, association, educational institution affiliated with a labor group, or other nonprofit organization may apply. Applicants may apply for up to \$40,000 per grant project without a requirement for any matching dollars or in-kind contributions. Grant applications are due **Oct. 9, 2014**.

Some examples of past grant projects include:

- Development of safe lifting guidelines
- Pictograms for training people on hazards in the workplace with a variety of learning needs or language barriers
- Manuals and videos in Russian, Spanish, and English designed for home builders
- An educational program for prevention of ergonomic-related injuries for nurses

The Oregon State Legislative Assembly established the grant program in 1990. Employers cannot use the program to fund training projects for their employees.

Grant application information is available at [www.orosha.org/subjects/educate.html](http://www.orosha.org/subjects/educate.html).



***Congratulations to the new SHARP company:***

**Boise Cascade Company, Pilot Rock**

## Save the date for Oregon GOSH 2015

The Oregon Governor's Occupational Safety and Health (GOSH) Conference returns in 2015 to the Oregon Convention Center in Portland. The event, scheduled for March 9-12, is the largest conference of its kind in the Northwest and will feature speakers from across the country.

Sponsors such as SAIF Corporation, Liberty Mutual, the Portland Business Journal, and Hoffman Construction, have already signed on to support the event. Tony Howard, safety director at Hoffman Construction, which has been a sponsor for many years, finds the event valuable.

"We make it a point to send a number of our superintendents and engineers because of the high-quality training available," Howard said. "This is an excellent venue for our safety staff to build relationships with other professionals in the industry and stay abreast of the latest regulatory changes. Everyone benefits from seeing the latest safety technology offered throughout the exhibit hall."

GOSH award nominations are also being accepted to honor organizations and individuals who make extraordinary

contributions to workplace safety and health. Applications are due **Oct. 1, 2014**, and are available at [www.oregongosh.com/awards](http://www.oregongosh.com/awards).

For updates on the conference, visit the GOSH Facebook page at [www.facebook.com/OregonGOSH](http://www.facebook.com/OregonGOSH).

Oregon OSHA is partnering with the Columbia-Willamette Chapter of the American Society of Safety Engineers to sponsor the conference.



### Award Nominations

are now being accepted in categories for organizations and individuals who make extraordinary contributions to workplace safety and health.

[www.oregongosh.com](http://www.oregongosh.com)

### OREGON GOVERNOR'S OCCUPATIONAL SAFETY & HEALTH CONFERENCE

March 9-12, 2015 • Oregon Convention Center • Portland

**Application packets available at:**

[www.oregongosh.com](http://www.oregongosh.com)

Award questions: *Karen Blythe, 503-618-8871*

### Awards presented March 11, 2015

#### CATEGORIES

- Employer Safety Program
- Association
- Safety Committee
- Safety and Health Advocate (individual or team)
- Labor Representative
- Safety and Health Professional (industry specific)



**NOMINATION DEADLINE: October 1, 2014**

HONOR

Q:

**Our employees will be using alcohol-based chemicals to clean the inside of a confined space that contains noncombustible corn powder. What type of air-monitoring meter should we use to ensure that we are properly monitoring the space?**

A:

Are you sure the corn powder is noncombustible? Keep in mind that most organic dusts are combustible.

If the powder is noncombustible, then you need to ensure that the only hazard is from the alcohol-based cleaners. Be certain there are no other sources of atmospheric hazards in the space (such as water, rust, or decaying material) and there are no hazards outside the space that can affect the interior (such as the exhaust from combustion engines).

If the only hazard is from alcohol-based cleaners, then you may need to monitor only the lower explosive limit (LEL). Isopropyl alcohol and ethyl alcohol have “immediately dangerous to life and health” (IDLH) limits that are triggered at 10 percent of the LEL. If the alcohol your product uses has a lower explosive limit that has an IDLH level below the 10 percent LEL limit, you need to monitor for that substance. If that is the case, talk to your supplier to see if there is a sensor available for the meter you use.





## GOING THE DISTANCE – Meet a leading Oregon health and safety professional



**Company:** National Electrical Contractors Association (NECA) – International Brotherhood of Electrical Workers Electrical Training Center (NIETC), Portland

**Safety Director / Instructor:** Barry Moreland

**Common Hazards:** OSHA's focus four – falls, electrical-related hazards – shock and arc, struck by, and caught-in-between. More specifically, working with those new to the construction industry and trying to bring them up to speed on the level of safety awareness and expectations required in the workplace today.

### What is your background and safety philosophy?

Safety training came to me as a kid, when my father, who is also an electrician, made sure my brothers and I were aware of the various hazards using tools and equipment growing up in a rural setting. Those early lessons stuck with me as I entered into the NECA-IBEW electrical apprenticeship program in 1993 and ultimately turned out as a journeyman wireman. During that time, safety was not a heavily emphasized topic in either the course curriculum or the jobsites that I worked on. At least not the way safety is integrated into every aspect of our industry today. This is not to say we embraced working unsafely, but shortcuts were taken and when an incident or near miss occurred, we stopped, picked up the pieces, and went back to work. In short, we got lucky an awful lot of the time. It seemed to me that safety – or working safely – was only as important as what the person who was running the job made it. This could vary widely from jobsite to jobsite.

Continued on page 16



## GOING THE DISTANCE – Continued



After my apprenticeship, I had the opportunity to work on a wide variety of projects as a journeyman, foreman, and service electrician. I left the field in 2002 to work as an apprenticeship instructor at the NIETC and later to the safety director position where I have worked for the last decade.

My safety philosophy follows the same process as how I was taught as a kid. You have to let people know you care about their well-being and safety just as much (arguably more) as the tasks you are expecting them to perform. There has to be enough time to determine where their strengths and weaknesses are as they relate to hazard awareness and avoidance. The expectation that everyone has common sense, especially when it comes to hazards found in construction and maintenance, is ridiculous. Employees, especially new workers, easily relate how safety is in their best interest but many times lack the understanding on how workplace injuries can impact the overall job, their employer, the general contractor, and the customer.

**Above:** Electricians have aspects of the job that require them to work at heights and around other hazards. The scissor lift, being used by Neil Moreland (left) and Kevin Wright, had to maneuver around the marked hole.

**Below:** Electricians face hazards other than electricity. Moreland and Kevin Wright, check to see if scaffolding was inspected to hold heavy loads.



### Explain how you partner or work with businesses/trades?

This is where my job is the most rewarding. In the late '90s, the NIETC trustees established the safety director position to assist Oregon-Columbia NECA electrical contractors and IBEW LU 48 members in all aspects of safety compliance, hazard identification, and training. This structure is unique and, strangely enough, not very often duplicated in other trade union/specialty contractor associations. It provides an excellent resource for communication and networking between state and federal regulatory agencies, our clients, general contractors, and, probably most importantly, between our NECA electrical contractor safety managers and the IBEW 48 staff and members. I am able to participate closely with Oregon OSHA committees and stakeholder groups to stay ahead of regulatory changes that will impact our workers. I frequently provide electrical safety/NFPA 70E training and education for general contractors and clients so we can work more closely together on understanding how dangerous energized electrical work can be, both for the worker, and to the continuity of business function. I am able to visit jobsites and assist our contractors in hazard identification and control options. Our industry also has an effective joint NECA-IBEW safety committee, where I have co-chaired for the past 10 years.

Continued on page 17



## GOING THE DISTANCE – Continued

### What are some of the unique safety challenges you assist with in the field?

Our contractor safety managers are very competent in their jobs, so when they contact me for assistance, it is usually dealing with something out of the norm. An example would be when a large concrete batch plant was shut down due to damage of the electrical wiring on the main extraction auger at the base of a 90-foot tall, 180-foot diameter cement reclaimer. The entire dome was a permit-required confined space with significant atmospheric, engulfment, mechanical, and configuration hazards. Another project example is running large conduit for a client through a 4-foot diameter, 300-foot long tunnel under Highway 30 (also a confined space issue). Both projects were challenging, but with proper planning and execution, the clients were happy with our contractors and our electricians were kept safe from harm.

**Below:** Moreland teaches apprentices about ladder safety.



### Even a low voltage exposure can result in an injury. How do you get this message across in training?

Many people think it is just low voltage so it won't hurt you. The reality is that voltage is not a primary factor of shock severity. Current (amps), path through the body, and time are the key factors. There is a tremendous amount of information published about shock and electrocution statistics available to use in training. Videos are good, but real world examples using training aids like fatal facts do a better job.

### Any tips for keeping crews engaged in safety day to day?

Workers have to keep in mind that safety success is dependent on contributions from the whole team, not a safety manager or department. Supervisors need to let the crews know that, and empower them to be an integral spoke in the safety wheel. I want a crew that knows they can openly communicate about both safety and productivity concerns without fear of reprisal for doing so. Prompt action must be taken once these concerns are voiced. Inaction is a sure fire way to disengage crews from contributing in the future.

### What advice do you have for other safety and health managers hoping to make a difference?

I would encourage them to build a strong networking foundation. Ten years ago, that is what worked for me and I am still building it today. There are so many resources out there to improve safety knowledge, skills, and abilities. I have yet to find a safety professional who would not provide some direction, share their



**Top:** Moreland serves as an advisor to those in industry on complex projects. He looks at a new generator installed by Neil Moreland of Cherry City Electric. **Bottom:** Moreland works closely with Alan Keser (left), who represents IBEW 48 Union Electrical Workers.

opinion, or, in some cases, even written programs if asked. Some organizations, such as the [Construction Safety Summit](#), are structured to provide networking, sharing of best practices, even free training opportunities. Find resources like those and it will definitely make your job easier. ■



### August 2014 – Nomination deadline

**Workplace safety and health  
awards nominations  
are now being accepted!**

**Western Pulp,  
Paper, &  
Forest Products  
Safety & Health  
Conference**

**Red Lion Hotel  
on the River  
PORTLAND**

*Application deadline*  
**August 15, 2014**

**Southern Oregon  
Occupational  
Safety & Health  
Conference**

**2014 THE BUSINESS  
of SAFETY**  
**Smullin  
Health Education Center  
MEDFORD**

*Application deadline*  
**August 31, 2014**

**Apply today!**  
Application available at:  
**[www.oroSHA.org/conferences](http://www.oroSHA.org/conferences)**

### September 2014

The American Association for Safe Patient Handling and Movement (AASPHM), the Oregon Coalition for HealthCare Ergonomics (OCHE), and Oregon OSHA present the

*5<sup>th</sup> National*  
**HealthCare  
Ergonomics  
Conference**

**Safe Patient Handling**  
— From Beginning to  
Advanced Program Tracks

**Patient Safety Ergonomics**

**What's New in Bariatrics**

**Lean Ergonomics**

**Effective Wellness Programs**

**Design for Human Factors**

**Ergonomics for Support Services**

**Program Management**

**... and more!**

**September 8-11, 2014**

**Oregon Convention Center ★ Portland, Oregon**

**Shared Challenges, Real Strategies, Practical Solutions across the Health Care Continuum**

#### Goals

**LEARN** about current evidence-based practices related to health care worker and patient safety ergonomics. **NETWORK** and **SHARE** your knowledge with colleagues from throughout the U.S. and beyond. **TRY** the latest technology in ergonomics and safe patient and resident handling.

#### Who Should Attend

- Administrators and managers
- Nurses, aides, and therapists
- Support services staff
- Ergonomists
- Safety and health professionals
- Union representatives
- Patient advocates
- Safe patient handling and safety committee members
- Facility designers and managers
- Risk and quality managers
- Wellness program providers and coordinators

To register and for more information visit:  
**[www.regonline.com/hcergo14](http://www.regonline.com/hcergo14)**  
or email [oregon.conferences@state.or.us](mailto:oregon.conferences@state.or.us)

## September 2014



**LAUNCH**

**September 24 & 25, 2014**





**Stopping Normalization of Deviance**  
 Keynote by Colonel Mike Mullane  
 Retired pilot and Space Shuttle astronaut

**Safety & Health to Greater Heights**

**Riverhouse Convention Center • Bend, Oregon**

This conference is a joint effort of the Central Oregon Safety & Health Association (COSHA) and Oregon OSHA.

This event helps your organization improve workplace safety and health performance. Topics include information for all experience levels.

**Specific topics for the Fire Service.**  
 Visit the website for more information.



**Topic areas include:**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>◆ Safety Committees</li> <li>◆ Safety and Health Management</li> <li>◆ Fire Services Safety</li> <li>◆ Wellness</li> <li>◆ Disaster Preparedness</li> </ul> | <ul style="list-style-type: none"> <li>◆ Violence Prevention</li> <li>◆ OSHA Regulations</li> <li>◆ Industrial Hygiene Issues</li> <li>◆ Confined Space Series</li> <li>◆ Hazard Analysis and Inspections</li> </ul> |
|--|--|

*Don't miss the exhibits featuring the latest in safety and health products and services!*



**Registration open: [www.regonline.com/central\\_oregon14](http://www.regonline.com/central_oregon14)**

**Questions? Contact the Conference Section, 503-378-3272**

## October 2014

# 2014 THE BUSINESS of SAFETY

24th Annual

## Southern Oregon Occupational Safety & Health Conference

**October 14-16, 2014**

Smullin Health Education Center, Medford

**Sessions include:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Fundamentals of Enterprise Risk Management</li> <li>• Economics of Ergonomics</li> <li>• Combustible Dust Control</li> <li>• Employee Involvement</li> <li>• Preventing Catastrophic Risk</li> <li>• Injured Worker Rights &amp; Responsibilities</li> <li>• Required Safety Committee Training</li> <li>• New View of Safety – Building Defenses and Capacity</li> <li>• Effective Stretching Strategies</li> </ul> | <ul style="list-style-type: none"> <li>• Active Shooter Awareness</li> <li>• Hearing Conservation</li> <li>• Young Worker Training</li> <li>• Industrial Hygiene Instrumentation</li> <li>• Fall Protection Basics</li> <li>• Confined Spaces</li> <li>• Electrical Safety</li> <li>• Advanced Accident Investigation</li> <li>• Safety Training Techniques</li> <li>• Stress and Mental Health</li> <li>• The Future of Healthcare</li> </ul> |
|---|--|

**Costs to attend:**

Pre-Conference workshop (Oct. 14) ..... \$100  
 Full Conference (Oct. 15 and 16) ..... \$130  
 One day (Oct. 15 or 16) ..... \$90  
 Half-day (AM or PM on Oct. 15 or 16) ..... \$60

**Watch for registration information in mid-August 2014.**

**Exhibits • Awards • WellneWalk**

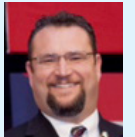


**Questions?** or to receive registration materials, contact the Conference Section, 503-378-3272 or toll-free in Oregon at 888-292-5247, option 1  
[www.asse-southernoregon.org](http://www.asse-southernoregon.org)  
[www.orsosha.org/conferences](http://www.orsosha.org/conferences)

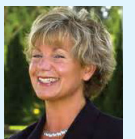
A joint effort of the American Society of Safety Engineers (ASSE), Southern Oregon Chapter, and the Oregon Occupational Safety & Health Division (a division of DOBS).



**Anil Mathur – Keynote**  
 CEO, Alaska Tanker Co.  
 National Safety Council's 2005 – "CEO's Who Get It"



**Erike Young, CSP, ARM**  
 Global Safety Manager, Google  
 Founder of ARM Study Group



**Robin Rose, MS**  
 Robin Rose Training & Consulting



**Jim Howe, CSP**  
 President, Safety Solutions  
 Chair of ANSI Z-10 Standard



**Ali Reza, PE, CFI**  
 Principal Engineer, Exponent  
 Principal Member – NFPA 654 Panel