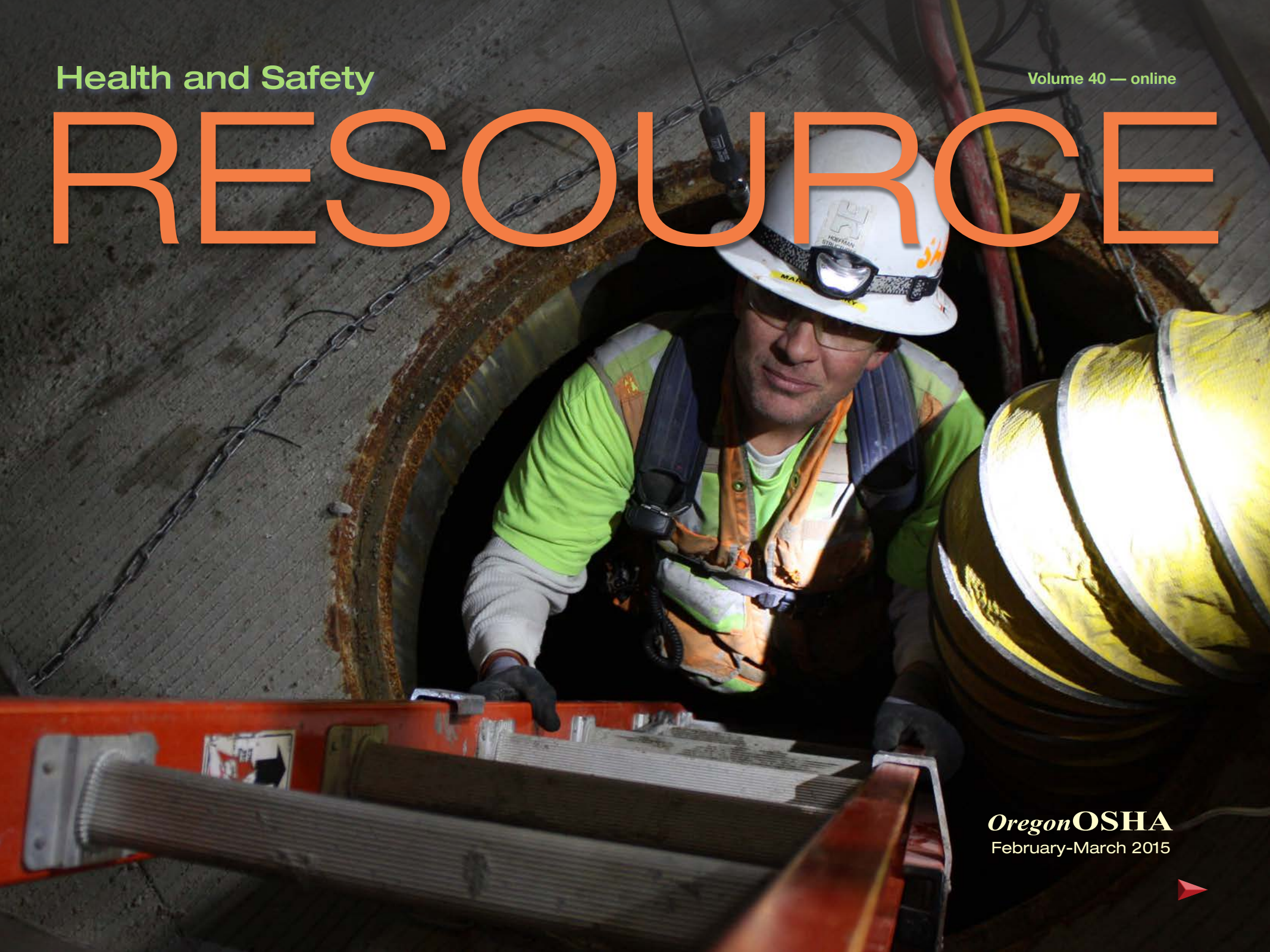
Health and Safety

RESOURCE

Volume 40 — online



OregonOSHA
February-March 2015

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Hoffman Construction has already implemented changes to be in compliance with Oregon OSHA's new confined space standard.

On the cover: Marcus Perry, of Hoffman Construction, enters a permit-required confined space.

RESOURCE

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DEPARTMENT OF CONSUMER & BUSINESS SERVICES
Oregon OSHA

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The challenge of outdated exposure limits

By Michael Wood

No one who follows workplace health and safety issues can remain unaware of the "problem with the PELs" – the permissible exposure limits adopted and enforced by both federal and state OSHA programs. Federal OSHA Assistant Secretary David Michaels has been paying particular attention to the problem in his recent public comments and appearances, including a video chat he sent out a few months ago.

The basic problem is simple – many of the PELs are badly out of date. It is not just that they have not been updated in 40 years. The real problem is that the science on which many of them were based has simply left those old levels behind. We know so much more about the health effects of many of these substances – and again and again we have learned that the levels that may have seemed appropriate decades ago were simply higher than we should reasonably accept. Yet those are the regulatory limits on the books.

To the practitioners "in the trenches," one of the challenges of these out-of-date PELs shows up when some carelessly describe exposures that do not violate the law as "safe levels" of exposure. That's inaccurate even with fully up-to-date PELs, of course. Like most of our rules, the PELs represent a minimum standard, not best practice. Exposures below the PEL should never be thought of as "safe." But the problem is made considerably worse when the PELs are as out of date as many are today.

Consultants – whether government or private sector – and in-house health and safety professionals can and should rely upon publications by the National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Government Industrial Hygienists (ACGIH) when assessing exposures and recommending remedial measures. But the presence of those resources does not solve the problem of regulatory limits that are out of date and often do not even reflect the full range of health challenges a substance can present.

Here in Oregon, we cannot easily tackle the entire problem. We simply do not have the resources. But we are in the early stages of an effort to narrow down the list of out-of-date PELs in our codes, with an eye toward tackling those that are either most disconnected from current science or that are likely to have the greatest impact in the workplace. We will, of course, be engaging with employer and worker representatives, as well as industrial hygienists and others outside Oregon OSHA. And we will be looking to the guidance provided by NIOSH and ACGIH.

Ultimately, we will be proposing rule changes to at least begin the process of better aligning the regulatory limits with current science. It may well be true that we cannot solve the problem, at least on our own. But we can certainly make it better.

Disguised danger

Construction company puts new confined space rule into practice

By Melanie Mesaros

Written in bold letters across Hoffman Construction's confined space program is the statement, "Any mistake in confined space work could cost you your life or that of a co-worker."

That reminder speaks to Hoffman's strong emphasis on confined space safety – a program that began at the company in 1995. Tony Howard, safety director, said the company recognized long ago the importance of protecting workers from potential dangers that may exist inside these spaces.

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A gas meter tests the atmosphere in a permit-required confined space.

Disguised danger - continued

"Confined spaces come in all shapes and sizes. You could have one that you can barely get into or one that's 10 stories tall. Either could be equally dangerous if proper protocol isn't followed."

— Tony Howard
Safety Director, Hoffman Construction

"Confined spaces come in all shapes and sizes," Howard said. "You could have one that you can barely get into or one that's 10 stories tall. Either could be equally dangerous if proper protocol isn't followed."

Confined spaces, such as tanks, wells, or tunnels, have limited ability to exit and may contain potentially harmful material. Employers must take proper precautions when their employees work in such spaces. Oregon OSHA's new confined space standard for construction takes effect March 1, 2015, but Hoffman Construction has already implemented changes to be in compliance.

"The No. 1 way the new standard has helped us improve our program is through the required evaluation process," said Howard. "The law is very clear that employees must be prevented from entering any space until it is fully evaluated."

Over the past 10 years, seven workers in Oregon died in different confined space accidents. In one case, a mechanic was killed in an explosion inside a tanker truck. In 2007, a pipe layer was struck by a swinging concrete pipe while inside a 30-foot deep hole.

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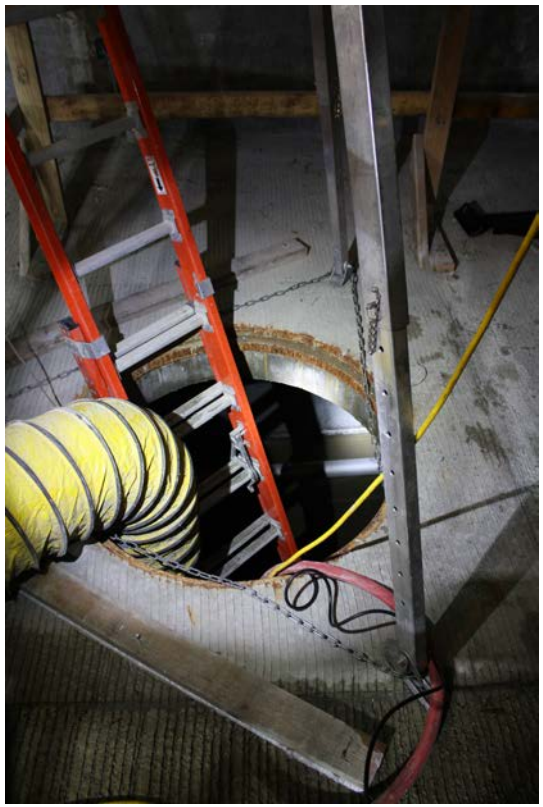

Right: Hoffman's best practice is to ensure ventilation equipment will provide a minimum of six complete air changes per hour.

Disguised danger - continued

"The sad reality is that, most of the time, if something goes wrong in a permit-required confined space, people do not end up in the emergency room," said Dave McLaughlin, an Oregon OSHA industrial hygienist. "They end up in the morgue."

Howard believes what makes confined space work so hazardous in construction is the dynamic of having multiple contractors working in a particular space. Each of them has the potential to add new and hidden dangers to the system as the work progresses toward completion.

"There are a lot of activities going on outside the space that could adversely affect the environment on the inside of the space as well," Howard said. "For example, an employee may be performing a task outside the space that seems pretty routine, like pressure washing a concrete floor, but the safety of the employees working inside the space could be greatly affected by this activity (water and/or carbon monoxide accumulation)."

Dangers present in the atmosphere offer no warning and can turn a confined space into a death trap, said McLaughlin. One common mistake is when people measure the oxygen content of a confined space.

"The normal air we breathe has an oxygen content of about 20.9 percent," he said. "If you were to measure 19.9 percent inside a confined space, you're not done. There is something displacing 1 percent of the oxygen, which translates to 10,000 parts per million of another gas. Depending on the gas, that could be a lethal concentration."

Hoffman uses a detailed checklist and flow chart to determine what type of space entry is required. The paperwork calls for the entry supervisor, entrants, and the attendant to assess the hazards ahead of time. Along with knowing the specific hazards within a space, workers must be trained in emergency rescue procedures.

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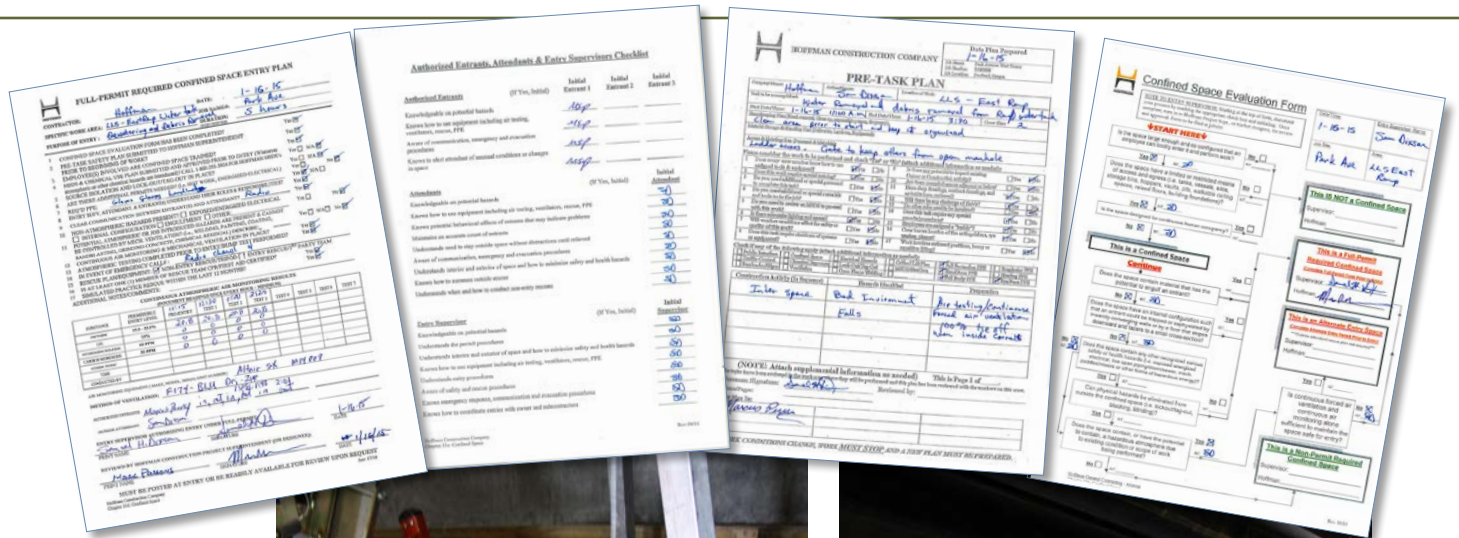

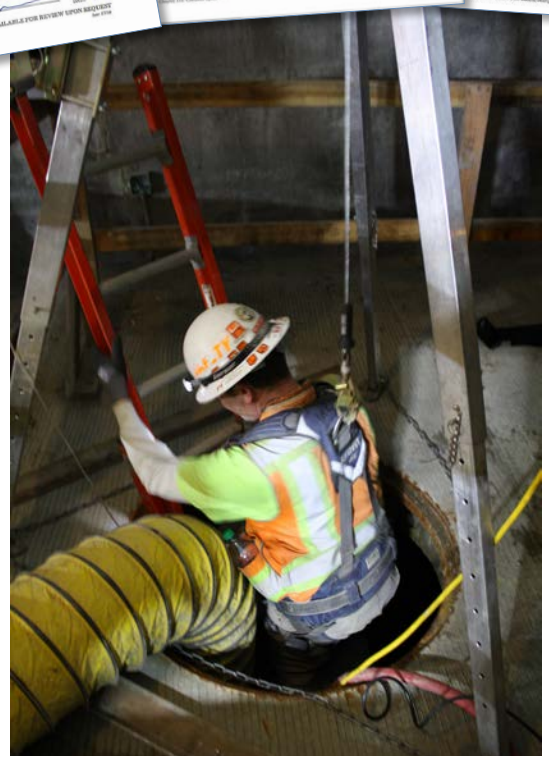

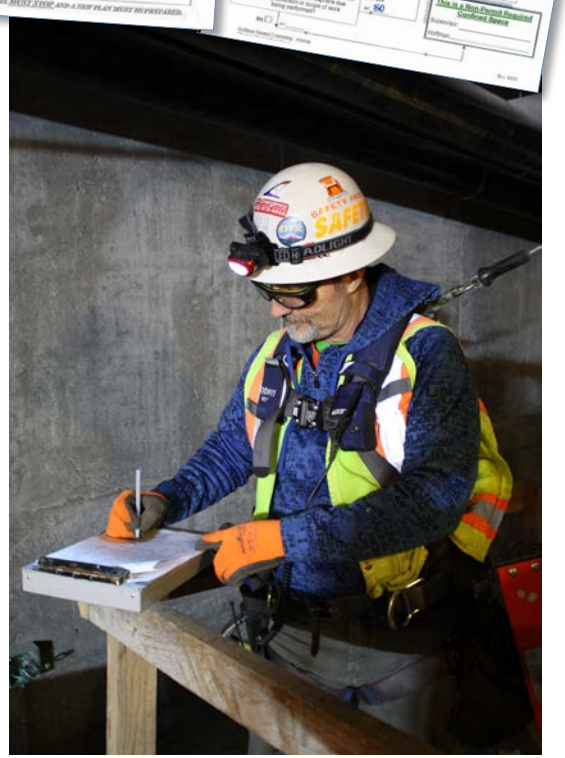

Above: Hoffman Construction uses these forms to assess a confined space, identify the hazards, and complete a permit.
Below left: Marcus Perry, a Hoffman Construction carpenter, is connected to a tripod in case a rescue is needed.
Below right: Sam Dixson, a Hoffman safety manager, records data on the permit.

For entering a permit-required space, here are some of the things you may typically find:

1. Tripod
2. Winch
3. Air monitor
4. Hose/blower
5. Attendant
6. Permit
7. Ladder
8. Entrant

"To keep yourself out of trouble, you need to re-evaluate the space each and every day prior to the start of work and whenever conditions change," Howard said. "Even if you were *just* there the day before, conditions could have changed dramatically and the hazards are, many times, invisible."

For more detail on Oregon OSHA's changes to the confined space rule (437-002-0146), see the article on page 8.

Planning for the worst

According to Dave McLaughlin, an Oregon OSHA industrial hygienist, more than half of the people seriously injured or killed in a permit-required confined space are would-be rescuers who are not trained or prepared to conduct a rescue.

"We frequently see permits where the rescue plan is to call 911. What most folks don't realize is that, with only a few exceptions, most community responders aren't set up to perform confined space rescue," McLaughlin said. "You can still include a call to 911 as part of your response, but it is your responsibility to get the employee out of the space and on the ground where emergency responders can begin to render aid."

A quick guide to Oregon OSHA's confined space rule

by Ellis Brasch

You may have heard that Oregon OSHA recently adopted changes to its confined space rule (437-002-0146) and that the rule now applies to general industry and construction industry employers. The rule became effective for general industry employers on Jan. 1, 2015. Construction industry employers must comply with the rule by March 1, 2015.

Here is a summary of the rule's key paragraphs.

Purpose and Application

The standard applies to general industry and construction industry employers whose employees work in or near permit spaces.

Exceptions – 437-002-0146(2)

The standard applies to workplaces in general industry and construction, but there are exceptions for certain types of work that are covered by other Oregon OSHA rules. Specifically:

- Construction work covered by Division 3/P Excavations and Division 3/S Underground Construction, Caissons, Cofferdams, and Compressed Air
- Enclosed spaces regulated by Electric Power Generation, Transmission and Distribution standards (1910.269 in Division 2/R and 1926.953 in Division 3/V), and 1926.953 in Division 3/V Electric Power Generation, Transmission, and Distribution
- Manholes and vaults regulated by 1910.268(o) in Division 2/R Telecommunications
- Welding in confined spaces regulated by Division 2/Q Welding, Cutting, & Brazing, when the only confined space hazards are related to welding
- Grain bins, silos, tanks, and other grain storage structures regulated by 1910.272, Grain Handling Facilities
- Diving operations regulated by Division 2/T, Commercial Diving Operations

Evaluation – 437-002-0146(4)

"Evaluation" means that you must identify all the confined spaces at your workplace and determine if those confined spaces have hazards that make them permit spaces.

The evaluation must be done while the confined space is in its normal mode of operation.

Appendix A helps you identify confined spaces and permit spaces. Appendix B has a list of hazards that can make a confined space a permit space.

A thorough evaluation of a confined space is not necessary if employees will not enter it.

Employers of mobile workers – such as plumbers, electricians, and construction workers – are required to evaluate confined spaces only in work areas they are responsible for, or where their employees are working.

Permit-Required Confined Space Entry Program and Permits – 437-002-0146(5)

If your employees will enter a permit space, you must develop a written permit space program before they enter. There are specific requirements you must follow in developing the program.

At fixed workplaces, employers must list the location of all permit spaces at the site and include the reason each space is classified as a permit space. Permit spaces at unmanned remote locations do not need to be listed until the first time an employee goes to that location.

You must review the permit space program when there is any reason to believe that it does not adequately protect employees.

Permit entry – 437-002-0146(6)

An entry permit describes acceptable entry conditions and verifies that a permit space is safe to enter. "Permit entry" means that one can enter a permit space until the entry permit verifies that the hazards in the space have been eliminated or controlled. There are specific requirements for items that must be included in the permit. Appendix C has an example of an entry permit.

You must develop specific procedures for issuing entry permits. The procedures must include how you will evaluate the hazards in the space and the work done in the space and the conditions necessary for safe entry. It is not necessary to put the procedures in writing.

Equipment – 437-002-0146(7)

You must provide your employees with equipment necessary for them to safely enter and work in a permit space. This section lists the equipment that may be necessary. However, the nature of the entry, the space, and the work performed determine the type of the equipment that employees will need. All equipment must be used according to the manufacturer's instructions, and employees must be trained on how to use the equipment you provide.

Personnel – 437-002-0146(8)

Working in a permit space involves ***entrants, attendants,*** and ***entry supervisors***. Before anyone enters a permit space, you must designate who has each of these duties. This section describes their required duties.

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Rescue – 437-002-0146(9)

Before your employees enter a permit space, you must develop specific procedures to remove them in an emergency or when they are unable to evacuate without outside assistance. The procedures do not have to be in writing but they must include the process for summoning rescue, summoning emergency medical services, or transporting injured entrants to a medical facility. Also required is a procedure for ensuring that rescuers have access to safety data sheets for hazardous chemicals that entrants may have been exposed to.

When it is feasible, you must use non-entry retrieval systems or methods for rescues unless they would increase the overall risk to the entrant or would not help the rescue. There are specific requirements for performing non-entry rescues and entry rescues.

You must inform rescue teams about the hazards in the spaces they may need to enter. You are also responsible for ensuring that the rescue teams have appropriate equipment and can efficiently rescue entrants.

Rescue personnel must respond to emergencies in a timely manner. The hazards of the space determine the timeliness needs.

All rescue personnel must know first aid and CPR. At least one member must be certified.

There are specific requirements for employers who use third-party rescue services. If you choose a third-party rescue service, you must ensure that the rescue service agrees to provide the service. You must also ensure that the third party is capable of performing all rescue operations.

Appendix D can help you choose an appropriate rescue service as well as evaluate your own rescue team if your rescue is done "in-house."

Alternate entry – 437-002-0146(10)

"Alternate entry" is a set of specific procedures for entering a permit space without a completed entry permit. Employees may enter a permit space without a permit only after all the hazards have been eliminated or all physical hazards have been eliminated and all atmospheric hazards are controlled with continuous ventilation. You must develop these procedures for each space that employees will enter; they are not required to be in writing.

If you use ventilation to control an atmospheric hazard, you must use equipment to continuously monitor for that hazard.

Alternate entry cannot be used to enter a continuous system unless you can isolate the area to be entered from the rest of the space, can demonstrate that the conditions that caused the hazard or potential hazard no longer exist within the system during the entry, or can demonstrate that engulfment cannot occur and continuous ventilation in the area to be entered is sufficient to control atmospheric hazards.

Entrants must have an effective means of communication – such as a two-way radio, cellphone, or voice – to summon help while they are in the space.

Each alternate entry must be documented with a specific list of items. These items also appear on an entry permit, which can be used as documentation.

Training – 437-002-0146(11)

All employees involved in permit space activities must be trained to perform their duties. The requirement includes rescue personnel and employees who enter spaces under the alternate entry.

Employees who work around permit spaces, but do not have responsibilities associated with those spaces, must have ***awareness training***. Awareness training gives these employees a basic overview of the permit space program, the permit system, and alternate entry procedures. If employees are unable to enter or open permit spaces then awareness training is not necessary.

It is not necessary to document awareness training.

Multi-employer worksites – 437-002-0146(12)

Before another employer's employees enter a permit space under your control you must tell the employer about the permit space hazards and about any precautions or procedures that your employees follow.

After your employees enter a permit space under the control of someone else (it could be a property owner or a general contractor), inform them about the precautions and procedures you followed and about any hazards that were present during entry.

Records – 437-002-0146(13)

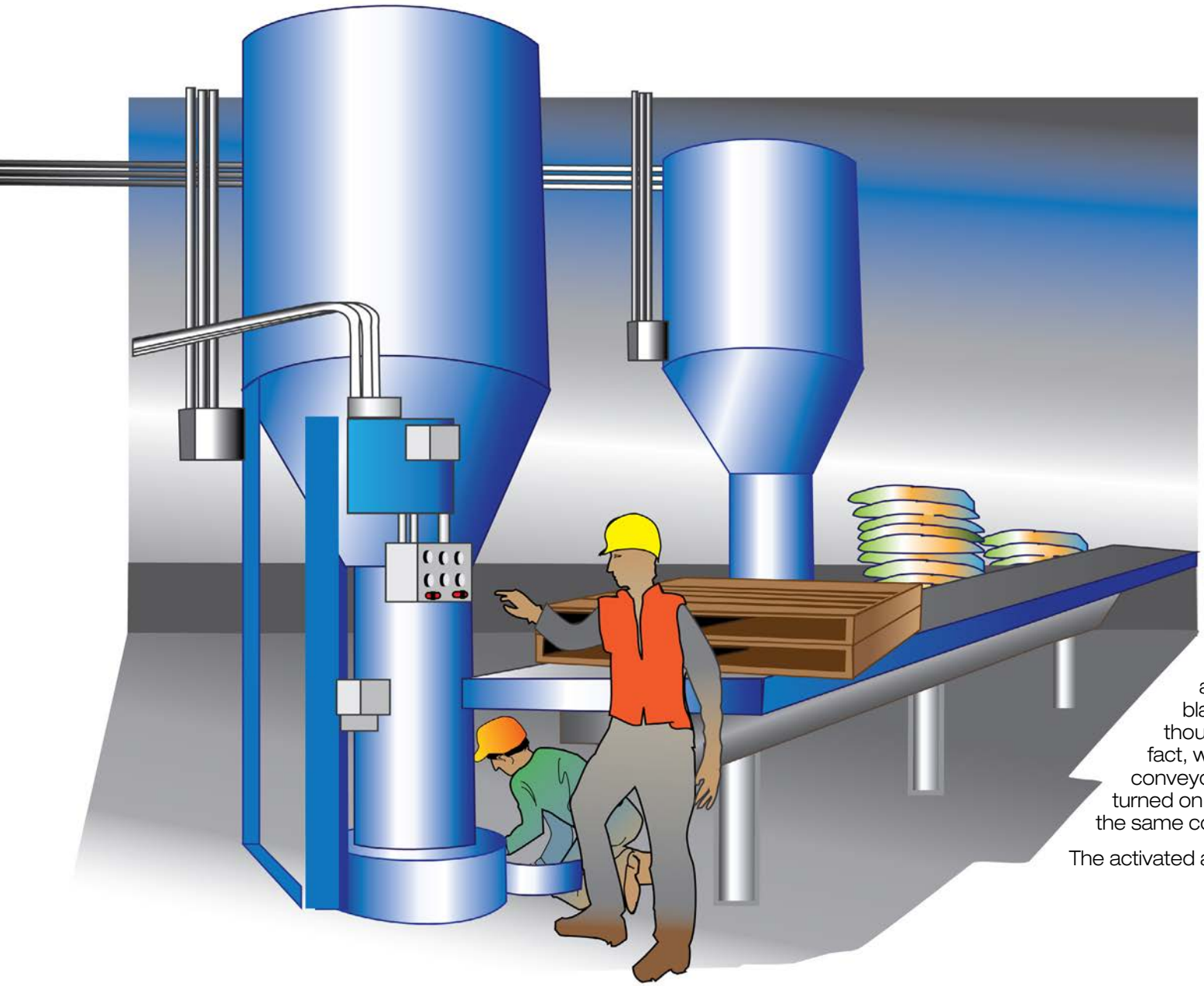
Keep cancelled permits for at least one year from the date the permit expired. Review them within one year of their cancellation to ensure the procedures for issuing them are still effective and the information on them still protects employees who enter the space.

Accident Report

Incident | Caught in mixing machine

Business | Farm supplies

Employee | Laborer



A laborer working for a company that mixes and bags grass seed was instructed by his line supervisor to hand clean one of two 12-inch diameter augers in a 15-foot tall silo mixer. As he reached into a 6-inch by 3-inch inspection hole to clean an accumulation of dust from the auger blade, a co-worker turned on what he thought was a conveyor control switch. In fact, what the co-worker thought was the conveyor control switch was the switch that turned on the auger – both switches were on the same control panel.

The activated auger amputated the laborer's left arm.

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Key accident investigation findings

- Employees were instructed to clean the inside of the machines with their hands to reduce the chance of creating more dust into the environment.
- Company managers did not inform the employees about the danger of cleaning the machines with their hands.
- The company did not document and use an effective energy control procedure for cleaning the mixer.
- The warehouse manager said that the company did not train employees about energy control procedures for cleaning the mixer.
- The warehouse manager said he left management of the energy control program to a consulting company that was supposed to conduct inspections, train employees, and monitor it. But the consultation company did not follow through with these tasks.
- The lead worker had a five-gallon plastic tote with a lid labeled "Lockout Kit." Inside the tote were two padlocks, a multi-lock hasp, screw drivers, and rags; it was locked by two larger padlocks when not in use. He said that he lost the keys to the padlocks inside the tote about two years ago and had not used the lockout padlocks since then.
- There was no mention of an energy control program or the missing keys to the padlocks in the company's safety committee meeting minutes.

Applicable standards

- **1910.147(c)(4)(i):** The company did not develop, document, and use procedures for controlling potentially hazardous energy.
- **1910.147(c)(6)(i):** The company did not conduct periodic inspections of energy control procedures at least annually.
- **1910.147(c)(7)(i)(A):** Employees did not receive training in the recognition of hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for isolating and controlling the energy sources.
- **1910.147 (c)(7)(i)(B):** Employees were not instructed in the purpose and use of the energy control procedures.


The 15-foot silo mixer.


The 6-inch by 3-inch inspection hole.


The conveyor control switch and mixer control.


The inspection hole closed.

Safety committees top violation in Oregon

Photo: Brandon Walston, Oregon OSHA

Safety committee violations were No. 1 on the most cited Oregon OSHA standards in 2014, with hazard communication and fall protection ranking second and third, respectively.

"What's striking is that the list changes very little," said Oregon OSHA Administrator Michael Wood of the top three violations that remain unchanged from 2013. "The areas we focus on, the problems we find, and injuries they cause tend to be very similar year after year."

With close to 400 violations cited, fall protection continues to be the top citation for the construction industry. The first-time penalty for a single fall violation averaged more than $1,000 (even with a majority of small employers) because of the potential for serious injury or death. Fall violations also account for the most frequent source of repeat violations on the list.

Oregon OSHA's top violations of 2014

1. Safety committees and safety meetings
2. Hazard communication
3. Fall protection (including ladder violations) (C)
4. Electrical: wiring
5. Fire extinguishers
6. Powered industrial trucks
7. Lockout/tagout
8. Machine guarding
9. Eyewash station
10. Hazard assessment (PPE)

*(C) = Construction standard

Electric Power Generation, Transmission, and Distribution rule proposal on hold; new proposal under consideration

In November 2014, Oregon OSHA proposed to adopt federal OSHA final rules in 29 CFR 1910 general industry, and 1926 construction that cover electric power generation, transmission, and distribution (federal OSHA published the rules in April 2014). The proposal included Oregon-initiated changes to the federal rule. After receiving many written comments and testimony at three public hearings in November and December 2014, Oregon OSHA will not adopt the rule as proposed. Instead, the division is interested in developing a new proposal to replace the federal general industry and construction rules with Oregon-initiated rules that covers both industries.

Oregon OSHA will reconvene an advisory group to present a draft of the consolidated rule and provide insight to proposed rule revisions based on the comments and testimony received. Oregon OSHA expects new rulemaking to be proposed mid-2015.

Public hearings on recordkeeping rule announced

Oregon OSHA will address changes to the federal recordkeeping requirements through its own rulemaking. As a result, the division is planning a series of public hearings on proposed changes to Oregon's Recordkeeping and Reporting Requirements in Division 1. The hearings will be held in Portland on Thursday, Feb. 26, in Bend on Tuesday, March 3, and in Eugene on Thursday, March 5.

This rulemaking incorporates federal OSHA's changes, but makes additional changes to report workplace amputations to include any amputation or avulsion that includes bone and/or cartilage loss and clarifies inpatient hospitalization related to workplace illnesses and injuries. A note was also added reminding employers that, in addition to these reporting requirements, an injury involving a mechanical power press must also be reported to Oregon OSHA.

For details about the proposed rule and locations of the public hearings, go to http://www.orosha.org/pdf/notices/proposed2015/ltr-div1-recordkeeping.pdf

The rule adoption tentatively will be March 2015 (effective January 2016). The comment period ends March 11, 2015.

Oregon Supreme Court rejects burden imposed on Oregon OSHA by Court of Appeals

The Oregon Supreme Court rejected an Oregon Court of Appeals decision in ***Oregon OSHA v. CBI Services*** that focused on employer knowledge in citing a violation.

The high court rejected the appeals court's construction of the statute, but it affirmed the outcome in this case "on other grounds," meaning that the case will be returned to the Workers' Compensation Board to make a decision in light of the court's ruling.

At issue in this case is what the statute means when it says that an employer "could not with the exercise of reasonable diligence know" of a violation. The Court of Appeals held that the statutory phrase refers not to whether an employer "could" know – in the sense of being capable of knowing – of the violation; rather the phrase refers to whether, taking into account a number of specified factors, an employer "should" know of the violation. . . . [W]e conclude that the Court of Appeals erred in its construction of ORS 654.086(2), but we affirm on other grounds.

GOSH 2015 coming to Portland in March

Registration is open for the ***Oregon Governor's Occupational Safety and Health (GOSH) Conference,*** to be held March 9-12, 2015, at the Oregon Convention Center in Portland. With more than 160 workshops and sessions, it is the largest event of its kind in the Northwest.

"An event such as GOSH provides the opportunity for organizations to become re-energized," said Oregon OSHA Administrator Michael Wood. "Whether we are professionals in the field, or simply committed employers and workers, GOSH can help remind us why health and safety matter. Ultimately, it's about people – about people going home safe and whole. About people spending time with their friends and families, rather than having that time cut short by a workplace injury, illness, or even death."

2013 GOSH Awards luncheon

Keynote speaker Jim Wiethorn, a forensic engineer at Haag Engineering, will present "Forensics: It's Elementary My Dear Watson" on Tuesday, March 10. Wiethorn, who has examined more than 800 crane accidents during his career, will talk about how to effectively conduct an accident investigation.

"The key to forensic investigations is focusing on evidence," said Wiethorn. "Evidence tells a story. Examine the details, follow the falling dominoes, and you will have the answer."

2015 Keynote speaker, Jim Wiethorn

Other general topics covered at conference include:

- **Safety committee training**
- **Safety leadership and workplace culture**
- **Ergonomics**
- **Regulatory updates**

The conference will also feature session tracks on specialties such as utility work, construction, emergency preparedness and response, agriculture, and health care.

2013 Columbia Forklift Challenge

Back by popular demand is the *Columbia Forklift Challenge* and registration is open to participants. Trained forklift drivers will compete for cash in an obstacle course designed to test their skills and safe operation on Wednesday, March 11, 2015.

The Oregon Occupational Safety and Health Division (Oregon OSHA), a division of the Department of Consumer and Business Services, is partnering with the Columbia-Willamette Chapter of the American Society of Safety Engineers to sponsor the conference.

For more information on the conference schedule, events or to register, go to www.oregongosh.com.

Oregon OSHA awards three training grants

The Oregon Occupational Safety and Health Division (Oregon OSHA) is awarding three grants totaling more than $115,000 to help develop workplace safety and health education programs.

The recipients include:

NECA/IBEW - NFPA 70E: The "How To" Comply with OSHA Electrical Standards

NECA/IBEW will develop an online training to provide easily accessible information regarding electrical hazards, regulations, and protective equipment. The online training will help participants develop procedures that clearly identify their roles and responsibilities for safety in the workplace.

Grant award: $35,239.25

Oregon State University, College of Forestry - Association of Oregon Loggers: Safe Design of Mobile Anchors

OSU will develop a fact sheet on how to properly use mobile equipment anchors in logging operations. OSU will also create and record a two-hour webinar outlining safe equipment anchor design, along with the development of a mobile app for smartphones. The materials will be available on Oregon OSHA's website.

Grant award: $39,979

Northwest Forest Worker Center (NWFC): Safety and Health in Forestry Workers

NWFC will target low-literacy Latino workers in southern Oregon. Training will be developed to address preventing traumatic injuries by avoiding slips, trips, and falls. NWFC will use Promotoras (bilingual community health workers) to help with outreach and present the trainings to the workers.

Grant award: $40,000

The Occupational Safety and Health Education and Training Grant Program was established by the Oregon Legislature in 1990. Award recommendations are made by Oregon OSHA's Safe Employment Education and Training Advisory Committee, an advisory group with members from business, organized labor, and government.

Materials produced by grant recipients become the property of Oregon OSHA. The final projects are to be completed by the end of November 2015. The materials will be housed in the Oregon OSHA Resource Center and will be available online for use by the public.

Oregon businesses encouraged to take a 'Safety Break' May 13

Employers across Oregon are invited to promote workplace safety and health with training, award recognition events, or other creative activities during the annual Safety Break for Oregon on Wednesday, May 13, 2015.

Oregon OSHA coordinates the one-day event, designed to raise awareness and promote the value of safety and health in preventing on-the-job injuries and illnesses. The event is voluntary for employers and businesses can determine what activities are beneficial to their workforce.

"Like any safety stand down, Safety Break by itself cannot promise to magically make an employer's health and safety program real or more effective," said Michael Wood, Oregon OSHA administrator. "But as *part* of a genuine effort to address workplace hazards, this event provides an opportunity to sharpen the focus, and to remind both workers and their employers that it requires continued focus and diligence to create a workplace free from the hazards that can cause serious injury, illness, or even death."

Companies planning to participate will be entered to win one of three $100 pizza luncheons when they sign up online by Friday, May 8. The prizes will be given to participating companies as part of a random drawing. The Oregon SHARP Alliance is sponsoring the contest.

For more information, ideas on how to host an event, or to download graphics, go the Safety Break for Oregon website at http://www.orosha.org/subjects/safetybreak.html.

SHARP

Congratulations to the new SHARP companies:

- Swanson Group Manufacturing, Glendale
- VR Analytical, Bend
- Woodfold Manufacturing, Inc., Forest Grove
- Harbor Wholesale Foods, Roseburg

Q: **I work in a small medical office that is in one of our company's two leased buildings. Unfortunately, a number of mice and rats have found both buildings to their liking and have been running around for about a year. The landlord put traps down but the wily rodents ignore them. I am concerned that they may pose serious health hazards for our patients – and us. Does Oregon OSHA have rules for rodents?**

A: Oregon OSHA requires that workplaces be constructed, equipped, and maintained, so far as reasonably practicable, to prevent the entrance or harborage of rodents, insects, and other vermin. When such pests find a workplace to their liking – as in your case – your employer must start an effective extermination program to subdue them. If the landlord's traps are not effective, your employer is responsible for controlling them. If you have not done so, report the problem to your safety committee and ask your employer to contact the county health department, which may also have suggestions for controlling rodents.

You will find the requirements for controlling rodents in Division 2, Subdivision J, Sanitation – 1910.141(a)(5).

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

Company: Cascade Shoring, LLC

Cofounder and general manager: Bret Taylor

Common hazards: Falls, cave-ins, caught between, utility strikes, material handling

What is your background and safety philosophy?

I started in excavation safety in the mid '90s at a company called Cantel, Inc. I had no idea there was a whole industry devoted to trench protection until a friend invited me to see what he did for a living. After speaking to Glen Ellis, the owner, I was hooked. Glen was very instrumental in shaping my philosophy on the business. I still consider him a mentor to this day and rely on him for advice from time to time. Eventually, Glen sold the company to a larger company, and through the past several years, the industry has gone through a lot of change and consolidation. There were fun times, and not so fun times, but I found that sticking it out, and being hard working and honest paid off. People began to ask me for my expertise to solve their excavation challenges.

In 2006, I co-founded Cascade Shoring, LLC, which now serves all of Oregon and Southwest Washington from our operations in Salem and Portland. Building Cascade Shoring from scratch has been difficult, and several challenges have come upon us. We have assembled the best group of people over the years who have a passion for what they do. I love this industry, and find it very fulfilling to be part of this team in our goal to make the excavation industry safer.

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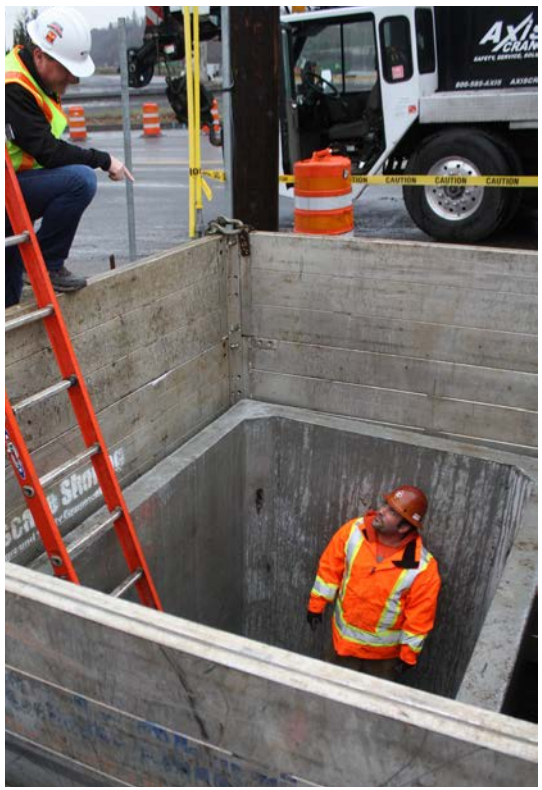

My philosophy is that being safe in excavations is usually easy to achieve when the equipment is planned into the price of the work. This allows for the luxury of choosing the right protection, rather than having to address it on the fly, which can be more costly in the long run.

Excavation safety has come a long way over my career. It used to be very common that customers would rent a shield, just to have it on the job in case OSHA showed up. This type of attitude is almost unheard of today, which shows how much importance that companies are putting on doing the work safely.

What are some of the unique safety challenges you have faced on current/ recent projects?

I recently helped design a solution on a job that required setting a manhole over an existing 24-inch sewer main. The challenge was that a fiber optic line was located almost directly above the sewer (where the manhole needed to be). After proposing some options, the city allowed the contractor to upsize the manhole and shorten it with flat top on it. Then we offset the rest of the manhole, so that it extended to the surface next to the fiber optic. We designed a support system that braced the ground around the existing fiber optic, with enough room to lower the oversize manhole sections into place.

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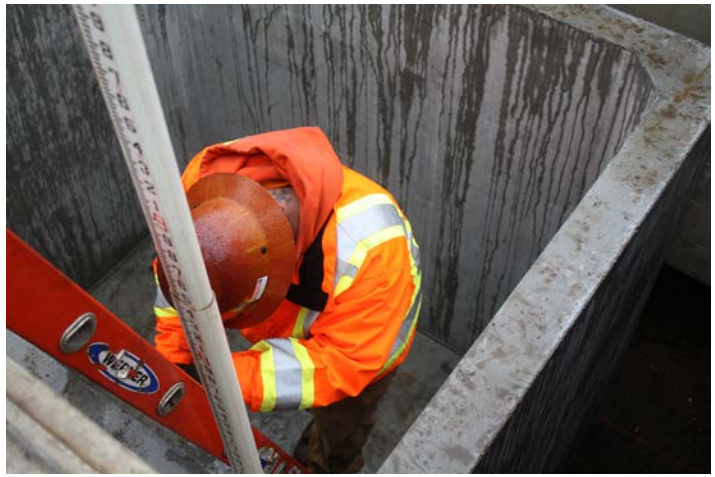

Top left: Bret Taylor (right) discusses shoring in place on a Portland job with Chris Stephens, a superintendent at Emery & Sons. **Bottom left:** Taylor (left) looks in on shoring used to protect employees on a Portland pipe project. **Above:** Justin Ryning, a foreman at Emery & Sons, helps install a new vault on a pipe project in Portland.

Above: A trench shield in place on this deep trench in SE Portland will protect workers from a cave-in.
Right: Mike Momper (left), a pipe layer with Stacy and Whitbeck, Inc., talks with Taylor about future work where shoring is needed.

Have you ever had a customer be involved with a cave-in or trenching mishap?

A customer removed a worker protection device because they were having a hard time getting a pipe into place. An employee jumped into the ditch without replacing the device and was involved in a cave-in. He was fortunate that he was only partially buried and ended up being OK.

It is not uncommon that it can take 20 minutes to free someone who is buried up to their waist. If someone were to be involved in a cave-in, they should see a medical professional immediately because of complications that can come from the lack of circulation caused by the pressure on one's extremities. One cubic yard of dirt weighs 2,700 pounds (on average, the weight of a small car). Imagine that pressure on your lungs and chest cavity. A person buried up to their neck can still suffocate from this pressure on the body.

What deficiencies are the most commonly found during excavations?

The No. 1 problem I see is equipment that is damaged to the extent that it no longer can function the way it was intended. This makes it out of compliance with the OSHA regulations. Structural damage to a worker protection device is considered a failed safety device.

I also see equipment that is the wrong size for the job (not tall enough, not long enough). Very often, employers put workers in harms way by making do with what they have. In some of the

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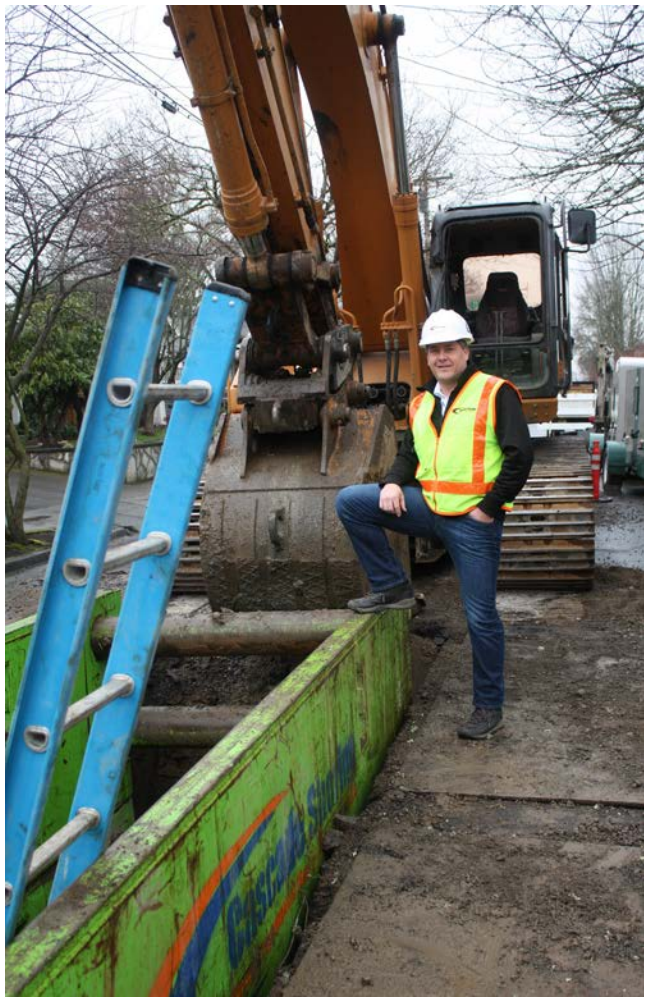
outlying areas, I'll see employers not using the proper equipment at all. Every hazardous excavation requires worker protection at any depth. In addition to this rule, excavations that are five feet or deeper require worker protection.

How important is the role of the competent person in excavations?

I think this is very commonly misunderstood. The role is of great importance, which is why OSHA requires that every excavation have a competent person. The "competent person" is defined as someone who is capable of identifying existing and predictable hazards and who has the authorization to take prompt corrective measures to eliminate them. Every excavation must have a competent person. In order to be a "competent person," one must have had specific training in and be knowledgeable about soil analysis, the use of protective systems, the requirements of the standard, and must be designated by the employer.

It is hard to have black-and-white rules that can be applied for all construction, let alone construction that occurs in areas that you cannot see before you begin the work. Having a competent person is the key to worker protection on excavation job sites, so they can see potential hazards as they develop, and have the authority to make changes to keep workers out of harm's way.



Above: Taylor says the most common issue he finds is equipment with compromising structural damage in use.

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

There are people in the industry who are good at identifying problems, but not coming up with solutions together with the employees involved in the work. I find that this makes a person lose respect and negatively affects the safety culture of a company.

I have found that pride is my worst enemy. I don't have to have all the answers in order to be a professional. In my opinion, this makes a person less valuable. It is true that the more experiences that I have had, the more I do have answers, but it is so valuable to have a network of people you can bounce things off of. I have such a high regard for so many of my customers and colleagues in the industry. When you aren't afraid to ask for advice, you develop a better relationship with customers, along with receiving input from guys who have "been there."

It is easy to misunderstand that forging good relationships and contacts with people in your industry can seem like a waste of time and a side track from main duties. My network of construction contacts has served me well over the years, and ultimately makes Cascade Shoring more valuable to our customers.

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