

ADOSH ADVOCATE



Improving Workplace Safety and Health

<http://www.ica.state.az.us>

Darin Perkins, Director

Fall 2000

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Comments and suggestions are welcome.

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Underground Utilities

The following is a reprint of an article that originally appeared in the Registrar of Contractor's newsletter.

The Arizona Division of Occupational Safety and Health (ADOSH) is concerned about the work practices of some of the contractors who are installing fiber optic cable throughout the valley. Literally hundreds of miles of cable are being installed. Much of this work requires excavations to be opened, many exceeding five feet in depth. Many of the contractors who are doing this work have been found in violation of the OSHA standards particularly as they pertain to excavations and work near underground electrical lines. Violations within the latter category have already resulted in at least three serious accidents when employees came in contact with the power lines. Miraculously, no lives were lost in those incidents. However, without increased oversight and compliance with basic safety regulations, fatalities are inevitable.

ADOSH requests the assistance of all parties, from the municipalities who are issuing the work permits, to the telecommunication companies who are contracting out the projects, to the contractors who are performing the work, in addressing this potentially deadly problem.

We are asking that municipalities who issue permits for this work, and for all excavation work, maintain close oversight of the work and that if hazards are noted, particularly as they relate to excavations or work around power lines, they be brought to the attention of the contractor and/or ADOSH to ensure that they are corrected. Municipalities should also obtain information or documentation that indicates a contractor is at least familiar with the work methods required to perform the job safely.

Telecommunication and other companies who are contracting the work should obtain relevant information about a subcontractor, which indicates sufficient experience and knowledge working around power lines and within excavations. As the contracting employer, there is also a general responsibility to oversee the project and ensure that work proceeds safely. Procedures must be in place addressing the steps to be taken when utility lines, particularly electrical, are encountered in the excavation.

Finally, those contractors that are actually performing the work bear the greatest responsibility for ensuring their employees perform it safely. Such contractors must ensure that all employees have been adequately trained to recognize conditions that could cause serious injury. Employees must be trained in the hazards of working in excavations, working around utility lines and any other anticipated hazards that might arise. When necessary, proper equipment such as shoring, as well as personal protective equipment, must be provided to ensure employee safety.

In light of the recent serious accidents, ADOSH is taking a firm stand against employers who neglect to provide a safe work environment and where employees, whether their own or those over whom they exercise general control, are seriously injured when working around electrical lines. In such cases, ADOSH will issue the highest penalties allowed by law.

The ADOSH Consultation Section provides services free of charge and is available to all employers in Arizona. If you have questions on working safely within excavations, around power lines, or any other occupational hazard, please do not hesitate to contact the section at (602) 542-1769 in Phoenix or (520) 628-5478 in Tucson.

-Darin Perkins, Director

A VERY, VERY CLOSE CALL!

It is not often that we, at OSHA, are called on to investigate an accident that has a happy ending, but this incident had one.

Early in the afternoon on March 23, 2000, a 23 year-old backhoe operator was excavating for a sewer line installation at a future housing development. The dirt was damp to the point of near saturation. It was heavy and sticky and was best categorized as type "C" soil. It had been previously disturbed, with two large water service pipes transecting the excavation and a gas transmission pipe along the side.

The operator felt he had brushed the gas pipe with the bucket and because he was concerned for the safety of the pipe, he left his seat and went into the excavation. It is thought that when he grabbed the gas pipe he finished the damage he had started with the bucket and the pipe blew apart.

A crew from Sturgeon Electric Corporation was the nearest human contact. They were 250' away working on a connection box. They heard the loud report of the rupturing gas pipe and rushed to the scene, checking for natural gas odor as they ran. There was no odor. The pipe had been under an air pressure test! When they reached the excavation there was a rapid reduction in hissing noise, assuring the electrical crew that the pipe was not "live". They examined the trench, finding a pyramid of dirt indicating a trench wall failure.

On close examination, Loren Chamberlain saw a very small patch of what looked like human skin protruding from the pyramid. He jumped into the excavation and began digging with his hands. It was the left elbow of the backhoe operator. Three additional Sturgeon employees jumped into the excavation in order to remove a large chunk of soil from the victim's head and chest.

Once the face was exposed they found that there was a heartbeat but no breathing and rescue efforts became more determined. There was a life to save here! Rural Metro rolled up as the victim's face and chest were exposed and took over CPR. They also assisted in the final extrication of the employee from the trench. The Mesa Fire Department also arrived and a med-evac heli-

copter was called. The victim was transported to the hospital, still unable to breathe on his own.

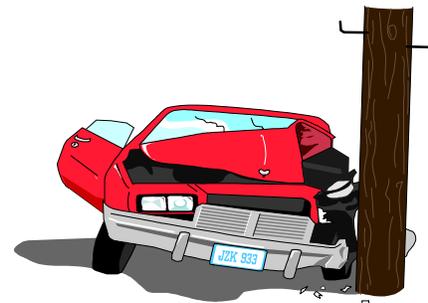
This accident happened on a Thursday. The following Monday, the operator went home! His ability to continue living is owed to a quick response by Sturgeon employees, two very professional fire department rescue crews, and some capable medical assistance at the Trauma Center of Scottsdale Memorial Hospital, Osborn. Very few people caught in a similar situation live to see another day. Please, be extra careful if you work in trenches!

-Ernie Miller

Retraction: In the last issue, we listed the Arizona Department of Labor's telephone number incorrectly. The correct number for the State Labor Department is (602)542-4515.

Defensive Driving - "Practice Makes Perfect"

During the last several years there has been a disconcerting pattern regarding fatalities in the workplace, a pattern that one might not anticipate. Would it surprise you to discover that if you operate a vehicle as part of your job duties you are at higher risk of being killed at work? Yes, the leading cause of work-related fatalities in Arizona in 1998 was highway accidents. A frightening 22 deaths accounted for 31% of the total number of fatalities for that year. Therein lies the need for defensive driving skills.



So what is defensive driving and what are we "defending" against? Well, lets consider some realities in our busy lives. As a society, fatigue is a predominant factor. According to the National Sleep Foundation, "Over the last 100

years, we've decreased our sleep by about 20 percent." Only one third of our citizens average eight hours of sleep per night. How does this play a role on highways? Well 1,500 people die and 71,000 are injured each year in fatigue related automotive accidents.

Consider this fact: not everyone stays entirely healthy during the year. We may be fighting a cold, or bouncing back from the flu, or dealing with asthma, or depression, or other, perhaps more serious, health conditions. What does a person do who isn't feeling well? He may choose to self-medicate with an antihistamine, which is known to impair driving ability. What about that minor tranquilizer used for treating depression? It can cause drowsiness, just like a common analgesic or pain killer. Even the antibiotic tetracycline can cause dizziness or nausea.

We all know that alcohol and driving don't mix. In Arizona the blood alcohol concentration legal limit is .08 above which a person is considered to be intoxicated. That's two alcoholic drinks in one hour. During our work week one out of every 50 drivers is legally intoxicated and the ratio approaches one out of ten on the weekend.

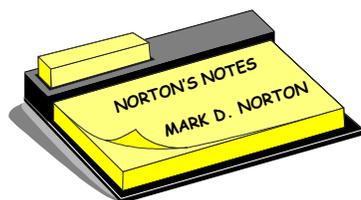
Think, too, about the general state of emotions folks may find themselves in. "Road rage" would be an unexpected event for most of us. Yet it certainly appears that our streets are getting meaner. Most irate drivers really don't need therapy, says a psychologist affiliated with the American Institute for Public Safety, they're just acting out a dimension of their personalities. Rather than burying their emotions over getting fired or going through a divorce, the scales get tipped and they act out their pent up anger.

Years ago I served in my community as an EMT. What I took from that experience was the absolute lunacy in people's decisions to not wear a seat belt. A 200 pound person in the back seat can break the front seat from its anchors in the frame of a car and crush the front passengers against the dash. I assisted two elderly ladies who were not buckled in and the driver, thrown from behind her steering wheel, crushed her friend against the passenger door. Its hard to heal the older we get. I've seen people with crushed knees because they failed to put on

their lap belt and were careened against something that broke their knees or legs. I've said it hundreds of times, no "excuse" is a good reason for not wearing your seat belt. Most companies today have made it a policy that seat belts will be worn in their vehicles. Seat belts do reduce serious injuries in a car accident!!! And in Arizona it's the law.

ADOSH would like to see work related highway fatalities disappear. We want to see you all go home safe and sound from your workplaces. The reality is that fatigue, drugs, prescription or otherwise, alcohol, and driver attitude contribute to this fatality statistic. Initiate Defensive Driving programs in your companies. Offer positive incentives for the clean driving records of your employees, even simple things like a lapel pin for a 5, 10, 15, or 20 year clean record can be a point of pride for a person. Encourage employees to **practice safe driving**. As with any other facet of life, "practice makes perfect".

-Linda Christopherson



The following information is provided to answer some of the more common questions routinely asked by employees and employers. Submit your questions to mark.norton@osha.gov or 2675 East Broadway Road, Tucson AZ 85716.

Q. Some of the workers on my crew use the western style hard hats. Are they approved by OSHA?

A. First let me say something about the phrase "approved by OSHA". Many manufacturers place labels on their products indicating or stating that they are approved by OSHA. Keep in mind that OSHA does not get involved with "approving" or "endorsing" a product for market however it may look at the product's end use and the potential hazards it may pose or the functions it serves. Labels may indicate that a product meets OSHA standards.

In addressing your question regarding the western style hard hat the key issue is whether or not the hard hat complies with the requirements of 1926.100 and ANSI Z89.1-1969 (or

later version). These ANSI standards are the standards that dictate the strength and durability requirements that the helmet should conform to. Helmets meeting these criteria are marked as such. The western style hard hat meeting the requirements of ANSI Z89.1-1969 would be acceptable. The revised ANSI standard Z89.1-1989 is more rigorous, and in a Federal interpretation dated December 31, 1998 Federal OSHA has stated that a western hard hat meeting the requirements of the revised standard would also meet the requirements in 1926.100.

Q. When do my employees have to wear hard hats?

A. This issue should be addressed on a case by case basis. The employer has an obligation to evaluate the work area or task, to determine if there are overhead hazards that might require the use of head protection. If so then hard hats must be required and their use enforced. The key issue is the presence of overhead hazards.

Basic Information Can Be The Most Important

Recently digging in my yard to plant a flower garden for my wife, I struck a black cable. Not knowing what the cable was I stopped to investigate. I knew all utilities were located a substantial distance from this area and that building codes required electrical wiring of this type to be buried more than the few inches I was digging. With this in mind my first reaction was to finish the digging and return to contemplating world resolutions in front of my big screen TV, out of the heat. Luckily I chose another option, although I believed at the time the wiring was probably debris left by contractors when they built the house. I decided to check the line for voltage. It turned out that the line was energized and had been placed there by the previous owner, apparently to supply power to an electrical outlet in that area. After shutting the power down to the entire house and checking the line two or thirty times for voltage, I removed the wiring and receptacle that was also buried approximately four inches.

Although my flower garden incident hardly warrants national recognition for appropriate electrical safety pre-

cautions it brings to mind those many injuries and deaths that have occurred from similar hazards. Contractors working to install utilities throughout the state are suffering injuries and deaths that, through reasonable inspection and basic training could have been avoided.

As our cities and industries continue to grow we find the need for more and more utilities; gas, electric, telephone, etc. These utilities, although generally placed a safe distance from the general public, pose an extreme hazard to contractors installing new lines. Even with the use of "Blue Stake" to locate the utilities prior to digging, injuries and deaths still occur.

Although many work practices seem like common sense to some, others may not share the same understanding. Failure to discuss the most basic precautions with employees and co-workers prior to work can result in miscommunication and death. To assist employers in preventing this I have included some basic precautionary measures to keep in mind.

1. Discuss the operation, including common sense items prior to work each day. A few seconds talking about the days activities and possible hazards can save lives.
2. Take the time to involve knowledgeable parties, (Az. Blue Stake, ADOSH Consultation, building permit departments, etc.). Another set of eyes might reveal more than what we see by ourselves.
3. Institute a written program to train employees to recognize hazards associated with your type of operations. Without a written program, training procedures are more likely to become lax with key points of information lost each time.
4. Institute a mentor program pairing up new employees for the first few weeks and then again at each new job with a more experienced employee.

By following these and other basic safety precautions injuries can be avoided and lives saved. For more information or assistance, contact the ADOSH consultation section at (602) 542-1769 in Phoenix or (520) 628-5478 in Tucson.

-Ken Gaut

ADOSH Education and Training Calendar

Registration for each course begins no earlier than 30 days prior to the date of the course. Location address and time of course will be determined at time of registration. Course information can also be viewed on the Industrial Commission's web site at www.ica.state.az.us/ADOSH/training.htm From this site, interested parties may e-mail instructors to register or obtain additional information. **These classes are free of charge.**

DATE	COURSE	LOCATION	TRAINER	PHONE #
October 10, 2000	Confined Space Entry Safety	Tucson, AZ	Linda Christopherson	(520) 320-4229
October 11, 2000	OSHA & Medical Establishments	Phoenix, AZ	Fernando Mendieta	(602) 542-1640
October 17, 2000	Fall Protection	Phoenix, AZ	Joe Gates	(602) 542-1641
October 17, 2000	Confined Space Entry Safety	Kingman, AZ	Linda Christopherson	(520) 320-4229
October 18, 2000	Back Injury Prevention	Kingman, AZ	Linda Christopherson	(520) 320-4229
October 25, 2000	The Respirator Standard	Phoenix, AZ	Fernando Mendieta	(602) 542-1640
November 7, 2000	Forklift Train-the-Trainer	Tucson, AZ	Linda Christopherson	(520) 320-4229
November 14, 2000	Excavation Safety Awareness	Sierra Vista, AZ	Linda Christopherson	(520) 320-4229
November 14, 2000	Forklift Train-The-Trainer	Prescott, AZ	Joe Gates	(602) 542-1641
November 15, 2000	OSHA & Medical Establishments	Yuma, AZ	Fernando Mendieta	(602) 542-1640
November 21, 2000	Excavation Safety Awareness	Tucson, AZ	Linda Christopherson	(520) 320-4229
December 6, 2000	OSHA & Medical Establishments	Phoenix, AZ	Fernando Mendieta	(602) 542-1640
December 5, 2000	Confined Space Entry Safety	Tucson, AZ	Linda Christopherson	(520) 320-4229
December 12, 2000	Excavation Safety Awareness	Payson, AZ	Joe Gates	(602) 542-1641
December 12, 2000	Back Injury Prevention	Tucson, AZ	Linda Christopherson	(520) 320-4229

Trainers may also be contacted by e-mail at: l.christopherso@osha.gov joe.gates@osha.gov and fernando.mendieta@osha.gov

Dates are subject to change

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