

INSIDE THIS ISSUE:

<i>Safety Incentives</i>	1
<i>Hearing Conversation</i>	2
<i>Safety When & Why</i>	4
<i>Prevent Back Strains</i>	6
<i>How Do You Compare</i>	7



We Dig Virginia!



SAFETY ENVIRONMENTAL ENGINEERING, INC.
SEE, INC.

SAFETY INCENTIVES BY MATT MURPHY

PART 3 OF 4

SAFETY NEWS

**THE SAFETY NEWSLETTER OF THE
HEAVY CONSTRUCTION CONTRACTORS ASSOCIATION**

Now those of you following this series will have done your homework from the last two installments. That was

- Fine tune the Goals of the Program
- Decide on the type of program that fits your company

By now you have looked at several solutions and, possibly, more than one interest you. If so, great! Your next step is to become a salesperson. You need to sell this idea not only to management but to the employees as well. You may find that it is wiser to be flexible and listen to possible changes now, rather than in the middle of your program.

Then, get your safety program out to management for final approval. Be prepared to show them how it meets the previously outlined goals. After you've got everything settled, make your presentation to the employees. To do this in an effective manner, you will need to clearly state the goals of the incentive program, to show them the reward system, and to explain why it is important for them to help you meet these goals.

Your next step is what I call the 'buy in' process. Here's an example: In the past six months we have had over 40 reports of fall protection violations. We are currently using an incentive program to make sure everyone stays safe in fall hazards. In the next three months, we will focus on fall hazards and rewarding not only compliance with our company rules, but will reward those that take an extra step and suggest ways to make our program more effective. For instance, maybe

our program doesn't cover all the scenarios that your employees find themselves in. If an employee brings a problem area to our attention, and participates in problem solving, their name will be added to a reward drawing. If you are using your equipment as per our program you will be added as well; the more you participate, the better your odds at receiving the reward.

This method acknowledges that we see there is a problem. It helps our employees know that we are dedicated to fixing the problem and you will be rewarded for helping us meet our three-month goal.

For any safety program, there are several key ideas to remember. At the outset, state the overall program, your goals, the rewards, and how each person can and should be involved. The clearer and simpler the program is, the more successful it can be.

Keep in mind that if, for instance, the reward is specifically for superintendents and foremen, only present that piece of your safety plan to them. If the reward is for everyone than make sure it is presented to everyone.

Continued on Page 4



HEARING CONVERSATION

BY J. R. GLASCOCK, VIRGINIA PAVING COMPANY

The construction industry can be extremely dangerous and can prove to be fatal if not taken seriously. Work sites are replete with potential hazards and precarious situations. One danger that is commonly overlooked on sites is noise and the damages that can be incurred to the human ear by the hazards associated with noise exposure. Sites are surrounded with various noise sources. A few sources of noise that are commonly found on sites are generated by air compressors, heavy equipment, tools, generators, and vehicle and/or construction traffic. All of these sources of noise can accumulate enough to cause permanent hearing loss over prolonged periods of time.

Prevention Magazine states, "hearing impairment is among the nations' leading chronic physical disabilities, and its impact on sufferers has few equals." Over 18 million Americans have some form of hearing impairment. Nearly 2 million Americans are nearly or totally deaf. Deafness has been described on enumerable occasions as a "miserable condition." The majority of individuals who suffer from a loss of hearing lose it gradually over periods of time. Normally hearing losses commence in their youth years and gradually exacerbates through life. In many cases the loss is so gradual the individual does not realize there has been any damage until after there is a significant (and permanent) shift in their hearing level. From the social standpoint individuals who suffer from hearing impairment often withdraw themselves to avoid the frustration and embarrassment of not being capable of hearing what others are speaking about. The emotional frustration and powerlessness associated with being unable to communicate efficiently may result in severe depression. Helen Keller made a cogent statement when she stated that being deaf was "a worse misfortune" than being blind.

The largest single contributing factor to hearing impairment and loss is precipitated by loud and/or excessive noise levels. Loud noises can damage fragile hair-like structures located in the interior portions of the inner ear. The excessive noise then radiates, magnifies, and transmits the sound levels to the brain. The ultimate damage to the cells is dependent upon the longevity and magnitude of the noise level exposure. Unlike most other injuries, hearing can not be repaired. If you are subject to high

levels of noise, your hearing will eventually deteriorate with irreversible results. Once the fragile hair-like structures in the inner ear are damaged, the loss that results is permanent.

The U. S. Bureau of Census, Statistical Abstract of the United States, notes that there are over 7.2 million workers employed in the construction industry. Of that number, the National Institute for Occupational Safety and Health's (NIOSH) National Occupational Exposure Survey estimates that more than 421,000 construction workers are exposed to noise levels exceeding 85 decibels (dB). Of those 421,000, NIOSH estimates that 15% of workers exposed to noise levels exceeding 85 dB or higher will develop hearing impairment or permanent loss in the future. Given the high percentage rates of potential hearing loss, it is critical that employers and employees recognize the hazards and utilize the proper engineering controls when working on or around the construction site.

The measuring unit for noise is the decibel. The abbreviation for decibel is dB. Higher numbers on the decibel chart indicates a louder noise. Scientists have determined that noise levels as low as 90 dB can be harmful to the human ear over prolonged periods of exposure and have cumulative affects. Excessive noises such as explosions, sirens, and impacts can cause immediate damage to the ear and result in a loss of hearing. The Occupational Safety and Health Administration (OSHA) states that noise is measured by frequency (high or low pitch) and intensity. Higher frequencies prove to be the most damaging, with noise divided into three types:

Wide band: wide frequency range
(i.e. engines)

Narrow band: narrow frequency range
(i.e. power tools and saws)

Impulse: temporary "beating"
(i.e. jack hammer)

Continued on the next page

HEARING CONVERSATION (CONTINUED)

BY J. R. GLASCOCK, VIRGINIA PAVING COMPANY

Hearing loss in the construction industry is completely preventable through a combination of engineering controls. These controls may include the utilization of quieter equipment, hearing conservation programs and effective hearing protection. Reduction in noise levels can be achieved in three different fashions:

- 1) reduce the amount of noise released at the source with proper engineering controls,
- 2) reduce noise levels by altering the path between the source and the human ear, and
- 3) reduce noise levels at the ear by utilizing personal protective equipment (PPE, earplugs or muffs), or by reducing level exposure durations through job rotations.

If you utilize earplugs or muffs for protection, you must ensure that they fit properly and that you wear them. Employers shall provide training on how to properly wear all (PPE) provided to employees. All hearing protection devices are labeled with a Noise Reduction Rating (NRR) that states how many decibels the plugs or muffs absorb in the reduction process. Ensure that they absorb enough to protect your ears because the (NRR) varies by brand and type. Utilizing plain cotton in your ears is not an acceptable means of protection and will not prevent damage to the ear.

When considering how devastating it would be to lose your hearing and how easy it usually is to utilize proper hearing protection, it becomes apparent how ludicrous it would be to take the risk of not protecting yourself against noise exposure. Marko Kaar, a safety consultant with Operation Safe Site states "I have found ambient noise levels of around 80-85 Db walking around job sites." "This is within the acceptable limits, but if normal conversation is 60 to 65 dB, then you are talking about well over 10 times the normal conversation levels." According to OSHA, the extent of the daily noise exposure is dependent upon the nature, magnitude, and duration of the work being performed. For example, rock drilling has the capability of producing noise levels of 115 dB; chain saws up to 125 dB; heavy equipment operation, 95 to 110 dB; abrasive blasting 105 to 112 dB; demolition, up to 117 dB; and needle guns, up to 112 dB.

Noise exposure levels of up to 115 dB is permissible for a maximum of 15 minutes for an 8-hour work day. No continuous exposure exceeding 115 dB is permitted without controls, according to OSHA regulation 29 CFR 1926.52. Noise exposures to impulsive or impact noise shall never exceed 140 dB peak sound pressure levels. "Prior to utilizing ear protection, your first line of defense should be through exploring ways and methods to reduce noise levels on your work site", states Kaar. Place mufflers on your equipment and make sure the windows in the operator's cab are closed if the machines are equipped with air conditioning. "You can't focus on noise alone," he continues. "You've got to focus on the entire working environment". Even things like new blades on saws and new bits on drills are going to reduce noise levels." Frequent jack hammer maintenance, or making sure the hammer is properly lubricated will help in the reduction of noise levels. However, reducing noise levels does not rule out the need for ear protection. The three main and most common types of ear protection include: ear muffs, ear bands, and ear plugs. Kaar believes that due to the tight fit in the

Duration per day, hours	Sound level dB (A-scale)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
.5	110
.25 or less	115

ear canal, ear plugs are the most effective device if worn properly. To properly insert the plug, users need to roll the plug between the thumb and forefinger and pull the ear back to straighten the ear canal. You must also be sure to wear clean ear plugs to prevent possible infections in the inner ear.

SAFETY INCENTIVES BY MATT MURPHY CONTINUED PART 3 OF 4

Now that your program is underway, the next step is to reward workers. The best time to reward someone is at the moment of their positive, safe behavior. If a worker stops a task and comes to you for more safety equipment, reward them right then. Say an employee asks to speak to you, because they have found that their safety equipment doesn't suit their current situation, and they have a suggestion, hand them their reward then and there. If you can, the best place to reward them is in front of other workers.

Why, you may ask? Have you ever been to an event where they only handed items out to a few people? How did you feel? I'll bet you said to yourself, 'darn why didn't I get one?' No matter how positively awful that prize really was, you wanted one because you are human and that is part of our nature. That fact is one of the easy keys to success with a safety program.

Another helpful tip is to keep people aware of how the program is doing. If one worker calls in with an issue, recognize the achievement. Take the example above - if a

worker helps to find a solution to a fall hazard, bring it up in your next meeting.

Example: We started a safety bonus system two weeks ago and we have already gotten a phone call from a worker in Maryland who ran into an issue and we found a way to stay safe and in compliance. It didn't take that much time, the workers remained safe, and someone is that much closer to winning the prize. This makes everyone's internal "I WANT IT" meter start clicking. Within the next couple of weeks you'll get even more calls.

And please, when someone calls with a suggestion, listen, don't automatically shoot them down. Say words of thanks - if you shoot back an 'are you kidding me, that's the most stupid idea I have ever heard,' you just killed your program. The more positives you have, the stronger your program will be.

The final installment of our safety program series will include how to report your success and when to switch your approach.

SAFETY WHEN DID IT START AND WHY?

BY RUSSELL QUESENBERRY, S. W. RODGERS CO., INC.

Let's look how some of it came about. In 1099, the Order of Saint John was formed of religious knights to care for wounded soldiers in the battlefields. Why?

For Safety and Health!!!!

In 1863 at the first International Geneva Convention, the Red Cross was created. Twenty years later in 1883, the first First-Aid certificate was issued. Today, we have at least one person with First-Aid training on every jobsite. Why?

For Safety and Health !!!!

In 1919, at the International Labor Conference, the ILO was founded and was asked to draw up a list of principal processes to be considered unhealthy in the workplace. Given the complexity of this task, an encyclopedia was substituted and was called the Encyclopedia of Occupational Health and Safety and called for an improvement of working conditions and the protection of the worker from sickness, disease, and injury arising out of

employment. It was decided the Encyclopedia would analyze work, workers, and the working environment, substances used at work, their related hazards, other sources of disease and injury and methods of treatment and protective legislation. Why?

For Safety and Health !!!!!

On December 29, 1971, President Richard Nixon signed the Occupational Health and Safety Act (OSHA). Their mission was to create standards to send every worker home whole and healthy every day. Since the agency was created in 1971, workplace fatalities have been cut in half and occupational injury and illness rates have declined 40 percent. At the same time, U. S. employment has nearly doubled. That's progress and just some of the highlights of the development of safety over almost a thousand years.

Just Meeting Safety Standards

By: Ed Boulanger, Safety Resource Associates

Many construction companies are intimidated by the scope of the OSHA Construction Safety Standards in 29CFR1929. These Standards require four hundred and fifty 8½ inch by 11 inch pages of small print, data tables and detailed diagrams in a soft cover publication like the one sold at [Http://www.mancomm.com](http://www.mancomm.com).

And if we become too focused on the Standards themselves we can miss the most important point: meeting the letter of an OSHA Standard does not insure your employees are protected from serious injury or illness at work -- no more than police enforcement of a posted highway speed limit necessarily protects you from serious vehicle accidents.

An illustration. The Normal speed limit on Interstate 95 is 65 mph. If a Trooper with radar clocks you at 85 mph you will most likely be cited and later convicted for speeding.

The maximum 65 mph speed limit was selected to reduce chances of serious

speed-related vehicle accidents under normal driving conditions, but it does not actually protect you from serious or even fatal accidents. A Trooper can't cite you for going 45 mph in a 65 mph zone -- but you may still have a fatal accident one mile down the road.

Let's change the situation: the same roadway is covered with ice. The same Trooper may cite you at 45 mph for driving too fast for existing road conditions but will then have a much heavier burden to convince a judge that 45 mph was actually too fast for those road conditions.

When a Virginia employer meets or even exceeds VOSH Standards it does not insure them against serious employee injury -- it only means the VOSH Inspector can not officially cite them.

On this basis we must consider an employer who just meets OSHA Standards as one who provides only the bare minimum of safe and healthful working conditions for their employees.

Most of our HCCA Members exceed VOSH Standards. It is in their best business interest to provide the highest level of safe and healthful working conditions for their employees.

SAFETY ... WHO IS IN CHARGE OF SAFETY

BY RUSSELL QUESENBERRY, S. W. RODGERS CO., INC.

Who is in charge of Safety - only those with the word safety in their job title? Safety Manager? Safety Director? Safety Man? Are they solely responsible for safety? These are titles given to job functions related to safety, but where are they when an accident happens? Most likely they are not on a jobsite when an accident occurs. But who is? **THE ANSWER IS SIMPLE, IF YOU ARE AN EMPLOYEE, YOU ARE RESPONSIBLE FOR SAFETY ON YOUR SITE.** Safety cannot be enforced only by those with the word safety in their job title. Safety has to be enforced by **EVERYONE.** No matter who you work for, no matter what your job title,

YOU ARE RESPONSIBLE FOR SAFETY!!!!

PREVENT BACK STRAINS AND PAINS ON THE JOB

FROM SAFETY+HEALTH MAGAZINE - MARCH 2007

Whether it is construction requiring heavy lifting or office work that requires sitting in the same position for extended periods, just about every job presents the opportunity for back pain.

Help avoid back pain by understanding the triggers and incorporating healthy habits for prevention. According to the Mayo Clinic in Rochester, MN, doctors and scientists are unsure of all the causes of back pain, but suggest the following are most common in occupational settings.

FORCE: Jobs requiring physical labor can lead to back injuries caused by force. Attempting to lift or move heavy objects can be harmful.

REPETITION: Overly repetitious tasks can lead to muscle fatigue and subsequent injury.

POSTURE: Office workers who spend long periods of time in front of a computer can experience back pain as a result of their posture. Sitting in the same position for extended periods can be harmful. In general, your body can tolerate being in the same position for 20-minute intervals before needing to readjust.

STRESS: Stress can cause muscle tension and tightness that can make you more susceptible to back injury.

Knowing the cause of your back pain can help you eliminate it. These tips can help you maintain overall back health and safety:

STAY FIT: Even people with physically demanding jobs need to be sure to get regular exercise. Exercise provides a host of benefits

for overall health and the prevention of back injuries; you can build stronger back muscles, increase your flexibility and maintain a healthy weight to prevent additional strain on your back.

WATCH YOUR POSTURE: Slouching can fatigue muscles and place undue strain on your back. When standing, be sure not to lean forward to work off a desk or table. When sitting choose a chair with back support and sit with both feet flat on the ground. If your chair does not offer enough support for your lower back, consider placing a pillow at the small of your back.

LIFT PROPERLY: When lifting a heavy object, be sure to lift from the legs and hold the package as close to your body as possible. Always ask for assistance if a load is too heavy for you to manage alone.

ADJUST YOUR WORKSPACE: Look around your work area and see if arrangements can be made to prevent potentially harmful repetitive motions or unhealthy postures. For example, consider a hands-free headset if you spend a lot of time on the phone.



HOW DO YOU COMPARE

By: Ed Boulanger, Safety Resource Associates

Most Workers' Compensation Insurance is "experience rated" by Insurance Companies to smooth variations in year to year costs. Three years of loss experience is normally factored in to calculate your rate paid per hundred dollars of payroll for the next year.

This is called an Experience Modification Factor [EMF] or Rate Modification Factor [RMF] and it can be used to compare the cost of accidents and injuries for your company over time.

Multiply your EMF times labor costs per \$100 of employee payroll, including subcontractors paid by "1099's", to calculate the average cost of coverage for a company in your industry with your annual labor costs – before any other adjustments offered by the insurance company.

If company "A" has an EMF of 1.0 your performance is exactly equal to the average of all other companies in your same industry. If your EMF is .70 it creates a 30%] competitive advantage compared to the average of your competition.

And it gets much better!

National Safety Council studies show the uninsured costs of accidents and illnesses average four times the insured costs so Company "A" enjoys a competitive edge of 150% of their annual Workers' Compensation premium compared to the average company in their industry.

EXAMPLE. Company "A" above has an EMF of .70 and their annual Workers' Compensation premium is \$100,000. Company "A" really enjoys a \$500,000 competitive advantage over their average competitor, based on equivalent total labor

costs within the industry.

Safety professionals also use Accident Severity and Incidence to compare companies within the same industry. They are calculated as follows:

$$\text{Severity Rate} = \frac{\text{Days Lost From Work}}{\text{Hours Worked} \times 200,000} \text{ (1)}$$

$$\text{Incidence Rate} = \frac{\text{Number of Injuries Beyond 1st Aid}}{\text{Hours Worked} \times 200,000}$$

(1)The 200,000 represents 100 employees working 50 weeks and 40 hours a week and allows comparison of work units with different numbers of employees.

Statistics reporting the average Severity and Incidence Rates for each industry are published annually by the Bureau of Labor Statistics and allow a direct comparison with other companies in the same industry.

An excellent use of these statistics is to track and improve safety performance. Companies set measurable improvement goals for areas like production, quality, and on-time delivery. Why not set measurable safety goals and tie performance to annual management salary reviews or Safety Incentive Programs for all employees? Safety goals can track reductions in the number of Serious Safety Violations found by VOSH, Insurance Carrier or independent safety professionals retained by your company to conduct site audits and suggest improvements to your Safety Program.

We recommend you establish several specific, measurable safety goals for your company and continuously communicate progress to your employees.

June 9, Saturday, OSHA 10
 7 AM—5 PM
 HCCA Office in Manassas
 \$185 for HCCA Members
 \$205 for Non-HCCA attendees
 Call or email Janice to reserve.

June 13 Wednesday
Safety Committee Meeting
 11:30 AM - 1:30 PM
 The Anderson Co.
 12150 Tac Court, Manassas
 At noon Guest Speaker
 VA State Trooper Tyler will
 Present "Load Securing and Haul
 Permit Requirements"
 Everyone is invited to hear his
 presentation. Please call or
 email the HCCA office to indicate
 attendance - will need to have a
 headcount for lunch - no charge

June 20 Wednesday, OSHA 10
 7 AM—5 PM
 Ferguson Waterworks
 13890 Lowe Street, Chantilly
 \$185 for HCCA Members
 \$205 for Non-HCCA attendees
 Call or email Janice to reserve.

June 23, Saturday, First Aid/CPR
 7 AM - 2 PM
 HCCA Office in Manassas
 \$85 for HCCA Members
 100 for Non-HCCA attendees
 Call or email Janice to reserve.

June 26 , Tuesday First Aid/CPR
 7 AM - 2 PM
 Ferguson Waterworks
 13890 Lowe Street, Chantilly
 \$85 for HCCA
 100 for Non-HCCA attendees
 Call or email Janice to reserve

SAFETY ENVIRONMENTAL
 ENGINEERING, INC. (SEE Inc.) offers
 complete safety solutions for small, mid-sized
 and large companies.

- *Jobsite Safety Audits
- *Accident/Injury Investigations



The Heavy Construction Contractors Association
 of Northern Virginia
 10756-B Ambassador Drive, Suite 201
 Manassas, Virginia 20109



SEE Inc.
 PO Box 276
 Keedysville, MD 21756
 301-432-3949

Saving Time, Money...and Lives.

We're on the Web!
www.safetybysee.com
www.hcca.net