

*Providing Safety & Health training programs that fit your needs & meet your objectives*

## Safety First!

### From the Fireworks Alliance

- Always read the instructions carefully before attempting to light a fireworks item.
- Never allow children to use fireworks without direct adult supervision. Children should be instructed on the safe use of fireworks before allowing them to participate.
- Store fireworks in a cool dry place, and away from children. Make sure small children cannot reach fireworks, and never allow a child to eat fireworks or put them in their mouth.
- Do not throw burned out sparklers on the ground. The hot debris left over from the sparkler can burn someone if they step on it.
- Always wear proper clothing whenever you use fireworks. This includes cotton or denim clothing, long pants, eye protection, covered shoes, and (if necessary) ear protection.
- Never drink alcoholic beverages or take drugs when using fireworks.
- Keep fireworks away from open flames, including cigarettes. Do not smoke around fireworks.
- Keep your fireworks dry. Never attempt to light fireworks that have become wet.
- Do not buy generic fireworks that do not have labels identifying the manufacturer. All consumer fireworks should be clearly labeled as "Class C" or "1.4G" fireworks.
- Do not buy illegal fireworks. Many of these devices contain explosive compounds that are sensitive to shock and friction.
- Never throw or toss fireworks at another person or animal.
- Do not light fireworks in crowded areas.
- Use proper instruments for lighting fireworks, such as instant-on torches, safety flares, punk sticks, and other suitable tools that provide some distance between the fireworks device and the person that is lighting it.

**Continued on page 7**

## Workers' Safety in a Down Economy

**By Eric Tofte, Director of Training, Evergreen Safety Council**

With the current economic situation in the US and the world, businesses every where are trying to do more with less. This of course has been around for a while, but in today's market it is being practiced with a whole new emphasis. Unfortunately one of the area's that is being cut is that of worker safety.

It's not that employers don't care about employee safety it is that they are trying to come in under budget, usually with only a 3 – 5 per cent margin and this forces companies to look at any and all things that can be cut. One of the first things that pop's to light is that of "training", yes training not safety per se. The problem is most training on the job site is safety training, maybe not how to be safe, but how to operate equipment and do the job. After all, if a worker cannot operate a piece of equipment, you have now created a potential safety issue. Not to mention using equipment, such as fall protection and PPE.

In a way, it is difficult to measure the return on investment of safety, but you know what? It does save money.

In an article for "Going Legal" by Mr. Paul Justice (September 19, 2008) he made an interesting statement – "Training programs are becoming shortened and even obsolete in some instances due to the nature of the economy. People are complaining that these issues are very expensive to up keep and that it is causing them to loose profits."

The thing is that we at Evergreen are seeing this also in today's economy. One of the first things that seems to be cut is training and safety. We know of a few safety professionals that have been laid off.

Now on the surface when you look at the savings from eliminating most safety and/or training related issues, it looks like you do save money. After all when it comes to training (safety or not) there are more than the cost of having a trainer come it, there is also the cost of bringing your staff in and if you bring 20 workers in for a 2 hour training block, after awhile this can add up and all some people see is the cost of the training and the time it takes.

What is not being realized is the potential

cost savings from having a properly trained employee.

One of the areas that good safety training can be cost effective is just from the prevention of fines from OSHA/DOSH, after all who wants to see this on the OSHA web site:

- OSHA proposes \$214,500 in fines against Portsmouth, NH, fish and seafood plant for process safety hazards
- OSHA proposes nearly \$136,000 in penalties against Sewon America Inc. for willful and serious safety violations

Actually fines are sometimes on the lower end of cost to having a poor or no safety program. There are other costs associated with having a nonexistent safety program.

Another cost when it comes to the safety arena, is that of having to pay high industrial insurance cost. I was talking to a safety director of a major construction firm a while back and he told me something very interesting. After he had taken the reigns at this company he saw that their experience rating was high for the construction industry. When he crunched the numbers he found that if he could just get back to a "1" he could save his company literally millions of dollars a year in workers compensation associated cost. When he further looked at the numbers he found that this would let his company under bid the competitors and still stay in the profit margin. Well it took a couple of years of training and rewriting the safety program, but his company is now under a rating of "1" and his management team considers that he is handling a multi-million dollar project each year, since that is what their safety program is saving them and they do consider this a form of profit.

Having an ineffective safety program can also cost a company in delays and bargaining issues. In the City of Las Vegas there has been a very large construction project known as "City Center" which is located right on the "strip". This project has seen several work related fatalities and many injuries. Well safety and training became such an issue the rank and file workers started to wildcat strike over the issue.

**Continued on page 7**

**safety solutions**  
... & HEALTH

Published monthly  
 ©2009 Evergreen Safety Council, all rights reserved.

**Board of Directors**

**Rick S. Bender**  
 President, WA State Labor Council, AFL-CIO

**Chris Elwell**  
 Special Projects Manager,  
 King County Dept. of Natural Resources

**Rick Gleason**  
 University of Washington

**Tim Hoard**  
 Safeco Insurance Companies, Retired

**Catherine L. Luchino-Mitchell (Sec.)**  
 Allied Health Div., Seattle C. C., Retired

**Stan W. McNaughton (Vice-Chairman)**  
 President, PEMCO Insurance Co.

**Guy P. Michelson**  
 Partner, Corr Cronin, LLP

**Atsuo Miyake**  
 Director Environ. Health & Safety, The Boeing Co

**Gov. John D. Spellman (Chairman)**  
 Lawyer, Carney, Badley, Spellman

**Paula Stewart (Treasurer)**  
 Risk Mgmt. Dir., Weyerhaeuser Co., Retired

**Bob Strong**  
 Corp. Safety Dir., Lynden Inc.

**Tom Odegaard**  
 President / Executive Director

**Star Conrad**  
 Newsletter Coordinator

**Monty E. Lish**  
**Norm Nyhuis**  
**Sandy Paquette**  
**Kat Spitz**  
**Eric Tofte**  
 Contributing Staff

**Jim & Caroline Dixon, Dixon Associates**  
 Design

**McCallum Printing Group**  
 Printing/Distribution

Evergreen Safety Council  
 401 Pontius Avenue North  
 Seattle, WA 98109  
 (206) 382-4090 • (800) 521-0778 Fax • (206) 382-0878  
 e-mail: esc@esc.org • www.esc.org



# When it all goes wrong...

## Part 2 of 2

*We are blessed, here in the Northwest, with seemingly unlimited opportunities for recreation on the water. We have a wide choice of lakes of all sizes, rivers, and salt water where we can enjoy our boats for exploring, fishing, water skiing, and generally having fun. Most of us have taken the time to prepare our boats for those anticipated trips; however, most of us have neglected to prepare for an all too common problem: how do you recover someone who has fallen overboard?*



soaked clothing. Simply put, you will be a “dead-weight” if you are not physically able to climb a boarding ladder or get up onto a swim step by yourself due to an injury or if you are unconscious.

**Number of persons able to assist the PIW:**

If the relative size and weight of the PIW and the onboard assistant are relatively alike, while not easy, one person can lift another back onboard. The technique will be slightly different than if two or more are available.

- Two or more rescuers onboard – once the PIW is alongside the boat, have them cross and fold their arms over their chest. Each rescuer will put one hand under the PIW’s armpit, and grip a sturdy part of the boat with their other hand. The goal is to lift together, and bring the PIW up on the gunnel, in a sitting position. From this position they can be brought the rest of the way back onboard.

- If the PIW is injured or for some other reason is unable to assist, a length of line passed under their armpits, and across their chest can be used. The actual lifting is the same as previously described. This is the only effective means on a boat with high freeboard, as described previously.

- If there is only one person on board, have the PIW face the boat, the rescuer should cross their arms and grip the wrists of the PIW. It may be necessary to “bob” the PIW up and down a time or two to get some momentum built up, then lift and turn the person to bring them again to a sitting position on the gunnel.

The best advice of all is to take a boating safety class and then think about what you would do in this situation, onboard your own boat – ask yourself what other equipment would you need, and do you and your other crew members know what to do? For further information see <http://www.boat-ed.com/wa/handbook/index.htm> or <http://nws.cgaux.org/index.html>

**Construction (design) of the boat:**

Some boats have relatively low “freeboard”. This is the distance from the surface of the water to the lowest point on the side or transom; the lower the freeboard, the easier it is to assist a person back onboard. Many family-sized cruisers have high freeboard, or even raised decks above interior cabin space, make the lifting process, directly by hand, nearly impossible.

Some trawler style or sail boats have a means of using mechanical assistance, a winch or windlass, with the line run through a boom or other rigging to both retrieve the person and get them back on board. Generally these would employ and “horse-collar” shaped device to safely lift the PIW.

**Condition of the PIW:**

Even the strongest of swimmers will become rapidly fatigued if they fall overboard in our typically cold waters, and especially if fully dressed, or even worse are wearing foul-weather gear. Cold water will rapidly lower your body temperature which will drain your strength quickly to where you may not be able to get back onboard without assistance. Others still onboard, are faced with the task of lifting your weight with little to no help from you. Due to the buoyancy of water, you will not feel like you weigh much, to those attempting to lift you, until those assisting you start to get you out of the water – you will weigh more than your bathroom scale claims, due to your

### Upcoming Conferences

### A chance to meet ESC Safety Trainers and Management

**Boeing Environmental Health & Safety Fair** – Aug. 4, 2010 - Renton, WA

**Client / Membership Luncheon** – Sept. 17, 2010 – Mt. Vernon, WA

**Oregon Employers for Traffic Safety Conference** – Sept. 21, 2010 – Portland, OR

**WA Gov. Ind. Safety & Health Conference** – Sept. 29-30 - Spokane, WA

**For information call 1-800-521-0778**

# Ergonomics

Over the last few years or so there has been discussion regarding the benefits of having an ergonomic rule or not. Currently there is no official rule, however OSHA and DOSH can use the general duty clause to cite a company with high ergonomic incidents. Whether or not there is or will be a rule, the fact of the matter is that employees are injured due to what are termed ergonomic situations. Things like carpal tunnel, bad backs, etc. are occurring to the work force and this is one issue that even office workers have an exposure to.

So if you do have office workers, and who really doesn't, here are some basic tips you can take to reduce potential ergonomic impacts on your work force.

**Take a look at the Work Area:** When setting up a work area, make sure that the space is large enough for your employee to spread out comfortably and allows for a full range of motion, which can be a special concern for those with longer limbs. There should also be plenty of room to arrange the items that are used most

frequently in such a way that there is no strain to reach them.

**Look at the Keyboard:** If employees spend a lot of their workday typing, where the keyboard is placed and how it is used can greatly affect the risk for getting RSIs (repetitive stress injuries) like carpal tunnel syndrome. Keyboards should be placed so that arms are parallel to thighs. If the employees desk doesn't allow for this, try getting a keyboard tray. Also employees should do their best to use good typing techniques, keeping wrists elevated and not hitting the keys too hard.

**Mouse use is important:** When setting up a desk, make sure to keep the mouse easily within reach and let people know not to grip it too tightly, as doing so can strain the muscles in the hand. If employees find that using a mouse bothers them too much, try using an alternate input device like a trackball or a touch pad.

**The Desk:** There is no one-size-fits-all desk, so choose one that is right for each individual employee. Also to help reduce the chance of injuries consider getting a document holder so the document can be lined up to be easier read.

**The important factor, the Chair:** A good chair can do wonders, as sitting is much harder on the back than it might appear to be. Make sure the lower back is supported, and adjust the chair so that one can easily reach the keyboard and mouse. If this means raising the chair so that the feet don't quite reach the floor, get a footrest to help keep the feet from dangling.

**Monitor placement:** Improperly configured monitors can cause a great deal of eyestrain, resulting in headaches and difficulty concentrating. Center the monitor in front of the employee at a comfortable distance, and adjust the brightness settings so that it's easy on the eyes. Make sure to take breaks from staring at your screen, too. Glare can be a problem as well, and if you can't seem to eliminate it, use a glass glare filter.

These are just a few ideas and these and more can be found on line and other resources. It is important for all workers to be in a safe ergonomic situation and if you have concerns about your workplace situation, give us a call at Evergreen we can help on your ergonomic issues and most any other safety issue you have.

## MEMBERSHIP CORNER

The Evergreen Board of Directors and staff recognize these returning members.

### Renewing Members (years of membership)

**Realm Incorporated (3)**  
Dupont, WA

**City of Lake Forest Park (2)**  
Lake Forest Park, WA

**K & L Distributors Inc. (9)**  
Renton, WA

**Lake WA School District #414 (6)**  
Redmond, WA

**City of Lynden (16)**  
Lynden, WA

**WA Cities Insurance Authority (9)**  
Tukwila, WA

**AK S.T.A.R./Tongass Substance (7)**  
Ketchikan, AK

**Taurus Industries Incorporated (3)**  
Olympia, WA

**Premera Blue Cross (7)**  
Mountlake Terrace, WA

**Colville Confederated Tribes (6)**  
Coulee Dam, WA

**Dunkin & Bush (4)**  
Redmond, WA

**Skamania County (14)**  
Stevenson, WA

**County Line Equipment (17)**  
Tacoma, WA

**Mowat Construction (9)**  
Woodinville, WA

**S & G Flagging (9)**  
Kelso, WA

**Haskell Corporation (4)**  
Bellingham, WA

**Skagit Transit (7)**  
Burlington, WA

**Diamond "B" Constructors (8)**  
Bellingham, WA

Evergreen Safety Council is a nonprofit, nongovernmental organization committed to health and safety at work, at home, in the community and while at play. Evergreen conducts safety training classes, performs consultations and distributes information for member organizations and individuals. Memberships support general administration and program development.

If you would like to know more about membership, contact Kathy Wax at 800-521-0778.

## TRAFFIC CONTROL SUPERVISOR CERTIFICATION

### Washington Classes

**TCS Certification -**  
Seattle, WA - Sept. 20-22, 2010  
Spokane, WA - Oct. 18-20, 2010

**TCS Recertification -**  
Seattle, WA - Sept. 24, 2010  
Spokane, WA - Oct. 21, 2010

### Oregon Classes

**TCS Certification -**  
Portland, OR - Sept 14-16, 2010

**TCS Recertification -**  
Portland, OR - Sept. 13, 2010

**Call 1-800-521-0778  
or visit [www.esc.org](http://www.esc.org)**

# Strengthen Risk Management by Integrating Root Cause Analysis - Part 2 of 3

By Brian Hughes and Mark Hall of Apollo Associated Services and Dennis Rygaard of affiliate Artemis Investigations

A root cause analysis program has the most positive impact on reducing or eliminating risk when it is directly integrated with the phases of risk analysis and risk management.

Starting with the three main elements of **risk analysis (RA)**, let's look at how the RCA program integrates:

## 1. RA phases:

Hazard identification -- identify risk agents, and the conditions under which they potentially produce adverse impacts.

Risk assessment -- describe and quantify risks.

## RCA steps:

Defining the problem – define the type and scope of risk that needs to be mitigated, including: a formal statement of what the problem is, when it occurred (including frequency), where it occurred, and the significance of it (i.e., actual and potential severity of the consequences). Because the best teams include people with diverse experiences, perspectives will be different. Disagreements about problem definitions and causes can waste valuable time. Solid RCA practices will help teams create problem definitions on which everyone agrees.

Evaluate the impact that the problem had on business goals, and uncover the potential consequences of recurrence. The “what” statement, referred to as the “primary effect” in an RCA, helps us define the hazard.

Creating a cause and effect chart – understand why a problem happened, and the evidence proving it. What are the causal relationships among all the inter-dependent sets of action and conditional causes? The cause and effect chart will define the lower-level details of the hazards in the risk analysis, thus making it easier to find proactive solutions.

## 2. RA phase:

Evaluation -- compare and judge the significance of risks. What are all the risk agents? What are all the conditions under which the risk agents could occur and cause an adverse outcome?

## RCA step:

Cause and effect analysis (with dynamic

analysis) -- analyze the major cause paths on the cause and effect chart, along with those from other problems, in order to identify common causes (i.e., similar causes that contributed to more than one organizational problem). Identify systemic causes<sup>1</sup> to highlight ways in which an organization is conducting its business that pose risks to multiple business goals. Implementing solutions for systemic causes may seem expensive when compared with the significance of any individual problem. But this logic is flawed. In calculating return on investment, the cost of controlling a systemic cause must be contrasted with the combined significance of all problems to which it contributed.

The **risk management (RM)** phase also is more powerful when the RCA steps are incorporated.

## 3. RM phase:

Option generation -- identify alternatives for managing risk.

## RCA step:

Solution development – challenge each and every cause by generating solution ideas, knowing that each cause could play a role in future incidents. Don't focus on a few causes at the expense of others, because something less obvious -- but important -- might be overlooked. Favor solutions that will eliminate causes most likely to contribute to a future problem – especially those with more severe potential consequences.

## 4. RM phase:

Option evaluation -- appraise and compare available options.

## RCA step:

Solution evaluation – evaluate the potential effectiveness of various solutions relative to the cost of the problem and the solution's probability for success. Focus more on identifying the risk of specific individual causes rather than generic categories of causes. Do the solutions that control conditional causes have a greater certainty of controlling risk because conditional causes are predictable and stable? On the other hand, are solutions aimed at controlling action causes less likely

to be successful because unexpected actions are usually unpredictable? For instance, if a worker moves to the wrong place at the wrong time, will you be more successful trying to control the action cause “worker moving” or the specific conditions that allowed him to move freely into the wrong place at the wrong time? What circumstances put the worker in that place? Was it because he was following instructions, because of unusual weather, the absence of another employee, or because no barrier existed to prevent him from moving to that location?

## 5. RM phase:

Option selection -- select one or more alternatives for implementation.

## RCA step:

Evaluate solution effectiveness – from all solution ideas, choose the best solutions using predetermined criteria. For instance, which solutions are the most likely to be successfully implemented because there is buy-in from those responsible for performing the new solution? Which solutions will provide the best value (return on investment or cost/benefit)? Which solutions will address multiple causes, common causes (that exist in more than one problem) and systemic causes? Which causes have the highest probability of occurring again and should take priority for elimination? Which effective solutions can be implemented quickly, immediately reducing the organization's vulnerability? Which long-term solutions will increase the certainty of preventing recurrence?

## 6. RA phase:

Implementation and enforcement -- implement, monitor and enforce alternatives.

## RCA step:

Solution implementation and monitoring – design metrics and track solution effectiveness. Properly prescribed solutions must take shape in the form of a specific action, accomplished by a specific person(s), within a specific time frame. Each solution must be assigned a metric and a time period by which it will be tracked to ensure that it is effective in preventing the cause(s) it is

**Continued top of next page**

acting on. Once the success of a solution is confirmed, the solution idea should be communicated across the organization and ideally implemented where the same causes are creating risk. The more causes that are controlled (i.e., the more solutions that are implemented), the greater the probability that problem recurrence is reduced.

*Systemic causes are individual causes or groups of causes that identify where the system itself (i.e., the way the organization conducts its business) contributed to a problem. Systemic causes can manifest at the organizational level and include causes such as policies, procedures and work practices (i.e., management systems) as well as at the work force-level including work practices and culture and at the individual-level including work practices, behavior, decisions and belief systems.*

**Root Cause Analysis (RCA) offered by Apollo Associated Services, LLC**

**Root Cause Analysis for Practitioners**

July 20-21, 2010  
 October 19-20, 2010  
 \$895 ESC member / \$1,095 non-member

**RCA Super User**

July 22, 2010  
 October 21, 2010  
 \$495 ESC member / \$595 non-member

For more information or to register for a class visit our website at [www.esc.org](http://www.esc.org)

**Pass the Safety Message**

You are welcome to copy, distribute and display articles and information from this newsletter under the following conditions:

**Attribution**

Please attribute the work to the Evergreen Safety Council and include bylines when reproducing an article or other parts of the newsletter.

**Noncommercial**

You may not use this work for commercial purposes.

**Clear Communications – An essential facet of safety**

There is a scene in a classic Paul Newman movie where one of the characters delivers what has now become an iconic line, “What we have here is a failure to communicate.” Whether you liked the movie or thought it was a “stinker” doesn’t detract from the truth of that comment. Unfortunately, in the work place the failure to communicate, can lead very quickly to a tragic and preventable injury or fatality.

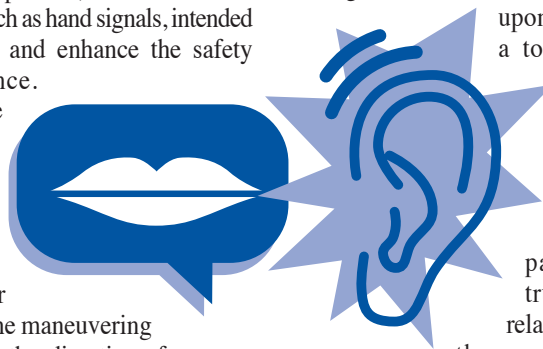
Many industries have their own “language”, words, phrases, or other means of communicating, such as hand signals, intended to speed the task and enhance the safety of its performance.

For example: the standard hand signals used in the crane industry have spread in their usage, to be used in other industries where the maneuvering of equipment and the directions for placing of materials needs to be communicated to the operator in a clearly understood manner. Standards writing organizations, such as ASME have included these signals in their publications to promote the used of a common set of signals, that a majority of workers can recognize, and more importantly can be used to clearly communicate the intended action.

But think for a moment about the more common means most of us use to communicate; “speaking out loud”. We often use phrases that we believe are perfectly clear in their meaning, but are they? I’m not talking about the rapidly changing “slang” terminology used in popular culture – remember when being told you were “cool” was a compliment – but now being “hot” appears to me to mean the same thing?

Here’s a prime example of a dangerous dependence on unclear vocal communication; I watched a worker guiding the driver of a delivery truck, while backing into a relatively narrow loading dock. The “spotter” kept saying “good . . . . . good . . . . .good . . . . .” I presumed the spotter was indicating that the backing process was proceeding in a safe

manner and that the driver was to continue “doing what they were doing”. As the truck approached to place where it was to stop, at the dock, the spotter used the same word, but just increased the volume of his voice, “GOOD!” I presumed the spotter was at this point attempting to communicate the message that the driver had indeed backed up far enough and was to stop at that point. I could only think to myself, I hope these guys have worked together for a long time as the subtle change of vocal inflection was being depended



upon to communicate a totally different set of expected actions. Since the loading dock area involved a slight slope to the grade of the parking area, the truck’s engine was relatively loud, making the verbal instructions difficult to hear, at best. The loud crash as the truck struck the loading dock with no perceptible reduction in speed – remember the driver was being told he was doing “good” – attested to the fact that the message to stop, had indeed NOT been clearly communicated.

This was a simple, but common example of a lack of communication. Granted, no one was injured, and loading docks are intentionally heavily constructed to withstand such abuse, but will we, or you, be so fortunate in a different set of circumstance.

If you are giving the directions, keep your communications clear, concise and simple. If you are receiving directions, acknowledge clearly that you understand the requested action. If you don’t understand, or loose contact with the person giving the signals, STOP until you reestablish contact and then only proceed once you are certain of the required action you are to take. Whatever the means of communication, verbal, visual or audible signals, insure that both the sender and the receiver of the signals, agree beforehand on the meaning of the signal. This will insure that the job can be completed in a safe and efficient manner.

## How To Adjust Your Head Restraints

By Ross Bentley

No matter how good a driver you are, there is always a possibility being involved in a collision. How you fare in the crash depends to a great extent on the crash-worthiness of your vehicle, and whether you were using the seatbelts, airbags and head restraints. Of all the types of collisions, the one where you can do the least to avoid is being rear-ended. And, this is where head restraints become critical.

First of all, a head restraint is not a head rest. Properly positioned, a head restraint will support the back of the head and the neck, protecting them from severe whiplash, if the vehicle is involved in a rear-end crash.

According to statistics, whiplash is the most common soft tissue injury that occurs during a motor vehicle crash. In fact, whiplash injuries cost North American motorists billions of dollars per year. That's costing you and I a lot of money out of our own pockets.

So, how do you adjust your head restraint? Even after dealing with traffic safety issues for almost 20 years, that's something I didn't know until just recently. No one had ever told me. And I had never read it anywhere. Head restraints have been in cars for years, yet few people know how to use them. Until now!

Really, it's very simple. The centre of the head restraint should be **level with the top of the ears**. This offers you the best protection.

Also, adjust your seatback so your head is not too far away from the head restraint. This may mean having the seatback more upright than you've had in the past. This is something I recommend anyway, from a driving position point of view. With the seat more upright, your head won't be quite so far away from the head restraint, allowing it to do its job when needed; not to mention you'll be more alert and be able to use the controls (steering wheel, pedals, etc.) more efficiently when driving this way.

Over the past few years, I've had the pleasant experience of being in three or four rear-end crashes. All of them were on purpose, while filming the crash scenes for a TV show. In each rear-end crash, we paid strict attention to the positioning of the head restraints. And in each crash - some of them at over 30 MPH - I walked away with absolutely no injury.

So, the next time you get in your vehicle, check the positioning of the head restraints before driving off. Take a few seconds to ensure that they line up with the top of your ears. And check your passenger's as well. © Ross Bentley

## Job Safety Analysis

Most all of us in safety understand the importance in identifying hazards that workers are exposed to and how to protect the exposed workers from the identified hazard. One of the best ways is to perform a job safety analysis (JSA) on jobs, especially if there have been no standard operating procedures developed for those jobs.

A Job Safety Analysis (JSA) is a method that can be used to identify, analyze and record 1) the steps involved in performing a specific job, 2) the existing or potential safety and health hazards associated with each step, and 3) the recommended action(s)/procedure(s) that will eliminate or reduce these hazards and the risk of a workplace injury or illness.

Of course one tends to ask themselves where to I begin? Well the first thing that should help is to select jobs with the highest risk for a workplace injury or illness. This can be done by knowledge of the jobs or by looking at your accident/incident reports.

Once you have identified the jobs you feel fit the above, you should do the following:

1. Select an experienced employee who is willing to be observed. Involve the employee and his/her immediate supervisor in the process.
2. Identify and record each step necessary to accomplish the task. Use an action verb (i.e. pick up, turn on) to describe each step.
3. Identify all actual or potential safety and health hazards associated with each task. (see below for hazards you should consider)
4. Determine and record the recommended action(s) or procedure(s) for performing each step that will eliminate or reduce the hazard (i.e. engineering changes, job rotation, PPE, etc.). When performing your JSA the following hazards should be considered:
  - Impact with a falling or flying object.
  - Penetration of sharp objects.
  - Caught in or between a stationary/moving object.
  - Falls from an elevated work platform, ladders or stairs.
  - Excessive lifting, twisting, pushing, pulling, reaching, or bending.
  - Exposure to vibrating power tools, excessive noise, cold or heat, or harmful levels of gases, vapors, liquids, fumes, or dusts.
  - Repetitive motion.
  - Electrical hazards.
  - Light (optical) radiation (i.e. welding operations, etc.).
  - Water (potential for drowning or fungal infections caused by wetness).



Also, when doing your JSA's you should look at each part of the job, since jobs can be broken down into several steps. Just think about something simple like unloading a pick up truck by hand and moving those items inside to be stored on racks.

The first step would be actually lifting/moving items from the truck bed to say a hand truck (dolly) – can you think of some hazards just for this step. The next step would be moving the hand truck into the storage room – again could there be hazards just for this step? Then you have the step of taking the items off the hand truck onto the shelves – again are there hazards? Well the answer is yes, each step does have several hazards and this is a fairly straight forward example.

We at Evergreen believe in safety and a good JSA is a great foundation. If you want to learn more about JSA development, we do offer classes and we will even come to your facility to train your staff. So if you have been doing JSA, great and keep on doing them, but if you haven't and need help, give us a call.

### Forklift Corner

#### Forklift Instructor Certification

This course meets or exceeds OSHA training requirements (29 CFR 1910-178). Participants must have experience in forklift operation to qualify.

#### Course Fee:

\$1095 Deluxe Instructor package  
Add Aerial Lift Instructor training for \$400

#### Forklift Operator Training

Any person who operates a powered industrial truck must have documentation of training and evaluation. This course exceeds OSHA and DOSH requirements.

**Course fee:** \$100 for classroom, plus:

New operators: \$100 per machine

Experienced: \$35 per machine

**Examples:** sit-down (counter balance), stand-up (narrow aisle), order picker, tigger or any style electric pallet jack.

Both courses are offered monthly. Please see the Events Calendar or visit [www.esc.org](http://www.esc.org) for training package descriptions and additional pricing information.

## Workers' Safety in a Down Economy

Continued from page 1

In June of 2008 this issues really came to a head when the site had its 6th death on 18 months. Safety and safety training was one of the things at the heart of this issue. The employees contended that the management of the site did not care at all about safety and the demands started flying and then the strike. This shut down the operation for a bit until the general contractor and project owners started to provide for worker safety. In a Las Vegas Review Journal article, The Alliance of Trade Unions Secretary-Treasurer Steve Ross stated "It is time to stop talking about worker safety, and time to start putting into place policies that are going to improve worker safety on the job site". Just think about how just a one day shut down can cost a project, let alone 3 to 5 days.

Of course with as much attention as the City Center project brought itself, you can imagine that Nevada OSHA has been all over that site, which they have. In addition to Nevada OSHA, due to the high fatality rate, Federal OSHA also as looked at it.

There is also a worker moral cost, or actually lack of moral cost. Employees know when their company does not care about their safety, they see it and they feel it. This causes a lot of workers not to care. This in turns cause production to be reduced, thus costing money to the company. Then if something really bad happens to a fellow employee (injury / fatality) then the moral really hits bottom and you can kiss good production good bye for a while.

So when you look at the money you are spending on safety and training, just don't look at the final bill. Consider what that money is going to and in the long run (sometimes not so long) that it is going to save your company money by having less industrial insurance cost, avoiding OSHA/DOSH fines and having better and safer trained employees.

The area of safety can be confusing, but there are organizations such as Evergreen Safety Council here to help you. So when you are thinking about cutting training and the like, consider giving us a call to work with you and see if we can show you how to save money with an effective safety program.

## Safety First!

Continued from page 1

- Never pick up unlit or unexploded fireworks. Malfunctioning fireworks should be soaked in a bucket of water for one hour before disposing. Never attempt to re-light malfunctioning fireworks.
- Never put any part of your body over the top of any fireworks device. Light all fireworks at arms length, and retire to a safe distance once the device has been ignited.
- When using fireworks that utilize mortar tubes, or repeaters commonly referred to as cakes), be sure the device is securely mounted or secured in a way that prevents it from tipping over once it is lit.
- When lighting fireworks, consider the direction of the wind and wind speed. Never light fireworks if the wind is too strong.
- Do not light fireworks near flammable objects.
- Keep unused fireworks in a closed container and upwind from the place you are lighting your fireworks.

## Evergreen Safety Council Calendar of Events

- July 8 \*SPT101AB Fed/State OSHA/Accident Prev. – Seattle, WA
- July 12-13 EverSafe Driving Instructor Certification (ITESD09) – Seattle, WA
- July 14 HST 204AB Fall Protection/Excavation – Seattle, WA
- July 15 \*SPT103X Safety as a Part of Management – Seattle, WA
- July 16 Flagger Certification (open enrollment) – Seattle, WA
- July 20 Forklift Instructor Certification (experienced) – Renton, WA
- July 20-21 Root Cause Analysis for Practitioners – Seattle, WA**
- July 21-22 Forklift Instructor Certification (ITFL001) – Renton, WA
- July 22 Root Cause Analysis for Super Users – Seattle, WA**
- July 22-23 P/EVO Instructor Certification – Seattle, WA
- July 23 Forklift Operator Certification (OTFL002) – Renton, WA
- July 28 HST 205AB Confined Space/Respirators – Seattle, WA
- July 29 \*SPT105X Presentation Skills – Seattle, WA
- • • • •
- Aug. 2 Forklift Instructor Recertification – Seattle, WA
- Aug. 4 HST 206 Ind. Ventilation/Indoor Air Quality – Seattle, WA
- Aug. 9-11 First Aid/CPR Instructor Certification (ITFA0-03) – Seattle, WA
- Aug. 12 \*SPT113X Understanding Ind. Ins/Workers' Comp – Spokane, WA
- Aug. 13 Flagger Certification (open enrollment) – Seattle, WA
- Aug. 16-17 Flagger Instructor Certification (ITFG004) – Seattle, WA
- Aug. 18 HST 207-1 Industrial Hygiene – Seattle, WA
- Aug. 18 Flagger Instructor Recertification – Seattle, WA
- Aug. 20 First Aid/CPR (open enrollment) – Seattle, WA
- Aug. 20 Forklift Operator Certification (OTFL002) – Renton, WA
- Aug. 20 Forklift Instructor Certification (experienced) – Renton, WA
- Aug. 26 \*SPT102AB JSA/JIT – Seattle, WA
- Aug. 26-27 Forklift Instructor Certification (ITFL001) – Renton, WA
- • • • •
- Sept. 1 HST 207-2 Industrial Hygiene – Seattle, WA
- Sept. 2 \*SPT107X Occ. Accident/Incident Investigations – Seattle, WA
- Sept. 3 HST 207-3 Industrial Hygiene – Seattle, WA
- Sept. 9 \*SPT106AB Safety Committee/Meetings – Seattle, WA
- Sept. 10 Flagger Certification (open enrollment) – Seattle, WA
- Sept. 13 TCS Recertification/ODOT – Portland, OR
- Sept. 14 Construction Safety Specialist Certification (day 1 of 7) – Seattle, WA**
- Sept. 14-16 Traffic Control Supervisor Certification/ODOT – Portland, OR
- Sept. 17 Client Membership Luncheon – Mt.Vernon, WA**
- Sept. 21 Oregon Employers for Traffic Safety Conference – Portland, OR**
- Sept. 20-22 Traffic Control Supervisor Certification/WSDOT – Seattle, WA
- Sept. 23 \*SPT108AB Empl. Safety Training/Communications – Seattle, WA
- Sept. 24 TCS Recertification/WSDOT – Vancouver, WA
- Sept. 27-28 Forklift Instructor Certification (ITFL001) – Renton, WA
- Sept. 28 Construction Safety Specialist Certification (day 2 of 7) – Seattle, WA**
- Sept. 29 Forklift Instructor Certification (experienced) – Renton, WA
- Sept. 29 Forklift Operator Certification (OTFL002) – Renton, WA
- Sept. 29-30 WA Governor's Safety & Health Conference – Spokane, WA**

\*Counts toward Safety and Health Specialist Certification

**To register 1-800-521-0778 or [www.esc.org](http://www.esc.org)**



## What's Inside?

**Workers' Safety in a Down Economy**  
page 1

**Safety First!**  
page 1

**When it all goes wrong...**  
page 2

**Ergonomics**  
page 3

**Root Cause Analysis Training**  
*Strengthen Risk Management – Part 2 of 3*  
page 4

**Clear Communications –  
An essential facet of safety**  
page 5

**Job Safety Analysis**  
page 6

**How To Adjust Head Restraints**  
page 6

## 2010 Oregon Employers for Traffic Safety Conference

**Tuesday, September 21, 2010**

*At the NECA-IBEW Training Center in Portland*

Driving – something we all do everyday – is the #1 killer in the workplace.  
Learn what you can do to protect your employees and your business.

**Presentation highlights of this intensive one day event include:**

### Speakers

*Moving Together: Traffic and Light Rail – Steve Mills, Operation Life Saver*

*Managing our Driving Behaviors: An interactive presentation – Syd Muzzy, Traffic Safety Consultant*

*How Highway Safety Features Work – Dave White, D&D Safety*

*Winter Weather Driving Strategies – Bob Yates, Evergreen Safety Council*

And more...

**Vendor Booths**

**\$45**

**Register online  
TODAY!**

[www.esc.org](http://www.esc.org)

Change Service Requested

401 Pontius Avenue N.  
Seattle, WA 98109



Non-profit org.  
U.S. Postage Paid  
Seattle, WA  
Permit 4514