



The American Society of Safety Engineers

Welcome to the

# Southern Nevada Chapter



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## The Safety Net

Southern Nevada Chapter Newsletter

<http://www.asselv.org>

April 2006

### ATTENTION TO ORDERS!

By order of the Chapter Executive Board, your presence is requested at the next Chapter Meeting!

**Date: April 12, 2006**

**Time: Opens @7:00 A.M.**

**Place: Main Street Station  
"The Social Club"**  
At Main & Ogden Avenue

### Company Appreciation Event

#### Keynote Speaker:

*His Honor Mayor*

**Michael Montandon,**  
Mayor of North Las Vegas

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#### Technical Presentation:

"Drug Testing, Methods and Procedures"

#### Speaker:

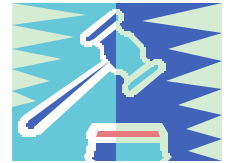
**Ms. Lori Haynie,**  
Operations Manager, Atlas  
Drug Testing

Continental Breakfast will be provided courtesy of your Chapter. Thank you!

### President's Corner

**Dr. Gloria Heatherington, Chapter President 2005 -2006**

Just when I thought it couldn't get any better for Safety this week, I received a letter from ASSE National President, Jack Dobson, announcing our Chapter's STAR Award for Chapter Year 2004-05! This is a significant recognition of Chapters who have achieved "superior service to our constituency, excellence in service to our community and professional development". Of the 150 chapter's world-wide, our chapter was one of thirty (30) to achieve this distinction. The STAR Award will be presented June 12, 2006, at the ASSE annual Professional Development Luncheon in Seattle, WA. If you're planning on attending PDC, select the luncheon and join us in receiving this well-deserved recognition. WAY TO GO ASSE SOUTHERN NEVADA SAFETY PROS!



What an honor it has been for us, your Executive Board and Leadership Team, to serve a vibrant and dynamic membership. Board members and Committee Chairs work for you, our vital members. I share this warm glow with each and every one of you. Well done! I have no doubt that our Chapter will achieve this distinction for our current chapter year given the commitment and involvement of our Board and members.

Your Executive Board members met with the RIMS (Risk and Insurance Management Society) local Chapter Board members in mid-March to explore avenues of mutual interest and support. One terrific outcome of this meeting is our first jointly sponsored educational event, "Introduction to Industrial Hygiene," on April 27. Registration forms are available on our website, [www.asselv.org](http://www.asselv.org). Special thanks to **Celeste Graham**, RIMS, for her excellent design of the Registration Form, and to our very own, **Dale Walsh**, CIH, who has agreed to present the course.

I would like to acknowledge several of our members who have served the Chapter above and beyond the call this past month.... a hearty Thank You! to **Brian Gourdie**, LVVWD; **Greg Wilson**, LVVWD; and **Steven Ross**, LVVWD; and **Pat Heyneman** (*soon to be member*) AET Environmental, for their significant contribution of time and expertise in conducting the CHMM Study Group during the month of March. Many of our ASSE members took the certification exam on March 25 and will be biting their nails in anticipation of exam grades for the next few weeks!

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Our 2006 – 2007 Slate of Officers and Ballots are posted on our website. The slate is running “Unopposed”, but we still need your vote according to our By-Laws, so please take a moment to fill out your ballot and send it to **Christer Backlund**, Nominations Chairman, either electronically or USPS. Elections will be formally announced at our May meeting.

It is also my pleasure to welcome five new chapter members who have joined us within the past 30 days. Welcome Aboard! to: **David King, Chris Mabey, Alfonso Mendez, Nelson Quezada, and Sherry West.** Our membership, as of this writing, is 286. Wouldn't it be grand if we could hit 300 before the end of the Chapter year?

Please join us on April 12th for our Chapter's Annual Company Appreciation Event, featuring His Honor, Mayor **Michael Montandon**, City of North Las Vegas, as our keynote speaker.



**American Society of Safety Engineers**  
*Protecting people, property, and the environment since 1911*

**Members Accepting Nominations for Leadership Positions in the ASSE Southern Nevada Chapter**

The following are Board Members or other Chapter Members who have accepted nominations to run for office or serve another term. The slate is running unopposed:

- Nomination for President: **Greg Wilson**
- Nomination for Vice President: **Doug Sharp**
- Nomination for Secretary: **Rodd Weber**
- Nomination for Treasurer: **Loren Pierce**
- Member-at-Large for Hospitality Industry: **John Willian**
- Member-at-Large for Construction Industry: **Tom Morano**
- Member-at-Large for CHMM: **Steve Ross**
- Member-at-Large for General Membership: **Al Johnson**
- Member-at-Large for General Membership: **Dale Walsh**
- House of Delegates (HOD): **Greg Wilson**

**Riddle:**

How many safety engineers does it take to change a light bulb?  
 Answer: None; safety engineers do not change light bulbs; they search for the root cause as to why the last one went out. [Submitted by **Joe Olson**]

**The Case of the Lava Lamp** (True Story)

(30 November 2004, Washington) Twenty-four year old Philip was found dead in the bedroom of his trailer home, with burnt remains of a Lava Lamp strewn over his kitchen. Puzzled investigators eventually pieced together a likely scenario for Philip's last moments. Lava lamps are a mesmerizing distraction. Philip couldn't wait to fire up his new Lava Lamp. He plugged it and waited for the pretty globs to begin their surreal dance. **But ... story continued on page 19**

"There are seven sins in the world: wealth without work, pleasure without conscience, knowledge without character, commerce without morality, science without humanity, worship without sacrifice, and politics without principle." - **Mohandas Gandhi**

**Special Announcement for ASSE Southern Nevada Chapter**  
From ASSE President, Jack Dobson, CSP

**AMERICAN SOCIETY  
OF SAFETY ENGINEERS**

1800 East Oakton Street  
Des Plaines, Illinois 60018-2187 USA

847.699.2009  
FAX 847.296.3708  
www.asse.org



March 22, 2006

Gloria Heatherington  
Southern Nevada Chapter  
8350 W Desert Inn Rd #1090  
Las Vegas, NV 89117

Dear Gloria,

It is my great pleasure to recognize you and the Southern Nevada Chapter as recipients of Chapter Stars Recognition for Chapter Year 2004-2005. I know the work and team effort of Chapter members that goes into a successful Chapter year and the diligence it takes to track the information that is requested for the Chapter Stars petition. Chapter Stars Recognition Awards will be given out at the Chapter Recognition Luncheon on Monday, June 12, 2006 at ASSE's annual Professional Development Conference in Seattle, Washington. The luncheon will be held at the Waashington State Convention Center from 11:45 AM to 1:00 PM.

As a Chapter Stars Recognition Award winner, you are identified among thirty-one chapters throughout the country with regard to your professional development, chapter communication and superior service to your constituency. You have set your chapter apart as a true performer and you should be proud of your achievements. Your dedication and commitment have truly helped ASSE to continue to grow and thrive through your outstanding grassroots efforts.

My hope is that the Society will continue to nurture leaders like you and that the Chapters will continue to strive for excellence, following your example. I hope that your term as a Chapter President was only a beginning of your service to the Society and that you aspire to continue to work for ASSE on the local, regional or national levels in some capacity.

Again, congratulations on your accomplishment and an award-winning year. I hope to see you in Seattle!

Sincerely,

Jack Dobson, CSP  
President

**BOARD OF DIRECTORS  
2005-06**

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Brookhaven National Laboratory  
Upton, NY

**EXECUTIVE DIRECTOR  
AND SECRETARY**

Fred J. Fortman  
American Society of Safety Engineers  
Des Plaines, IL

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## Announcements

### **Chapter Membership Committee updating Chapter Directory**



The ASSE Southern Nevada Chapter Membership Committee is in the process of updating and preparing the new 2006-2007 *Chapter Membership Directory*. If you've worked on this committee in the past, you know the hard work that goes into updating the directory; especially when members don't keep the chapter updated on their status and contact changes. It's a difficult and time consuming task locating some members and getting their updated information included in the new directory. After changes are made or new members are added, we don't get the ASSE National "official" chapter listing for many months or longer. It's more efficient to get our membership changes made locally if the chapter member would simply let the Membership Committee know something changed! If you've not let the membership committee know of your contact or status changes, then change your inertia [*inertia: resistance or disinclination to motion, action, or change*] and get on the telephone - today.

In addition, you may need to do an online member update for the national chapter roster. You can access the national process from our website at <http://www.asselv.org/> and click on "join or refer," or you may go directly to national's <http://www.asse.org/> and click on "join or refer." You will need your member number and last name. We do not have member numbers so **Rodd Weber** can't do this for you.

In order for the Chapter to have the correct contact information for you, **YOU** need to contact **Rodd Weber**, Chairman of Membership Committee. Over this past year, IF you have changed jobs, moved to a new position, added or deleted credentials, moved to a new location, changed phone or cell phone numbers, changed email, changed membership status, etc., etc. PLEASE contact Rodd so he may put your current data into the directory. Contact **Rodd Weber** at phone: (702) 734-5334, fax (702) 734-5335, cell phone: (702) 400-0081, or email at: [rweber@kitchell.com](mailto:rweber@kitchell.com). [Rodd is the Nevada Safety Director for Kitchell Contractors.] Thanks for your support.

### **Chapter recognition continues to roll in**

Another BIG kudos\* was communicated to our Chapter President in recognition of the exceptional Southern Nevada Chapter's Strategic Plan. Gloria Heatherington, Ph.D., (President) and the members of



Executive Board Leadership Team deserve our appreciation for their commitment to serving the Chapter. We also thank those members making their contributions to the Strategic Planning process. The chapter is being asked to share our outstanding Strategic Plan with other ASSE Chapters, as a superior guide or template for them to follow. Information from **Jim Gallup**, ASSE Region 2 Director, indicates "... The [Southern Nevada Chapter Strategic Plan] is one of the most complete plans in the country, according to our research." The Chapter is being asked to share our Strategic Plan with **Randy Oltmann**, President of the Four Corners Chapter (New Mexico), and other chapters. Over the past two years, under excellent leadership, the Southern Nevada Chapter continues to grow in accomplishments and earn accolades from around the country. Southern Nevada Chapter's membership is approaching 300 members! You can be proud to be a member of the Southern Nevada Chapter. Thanks to everyone who is supporting the volunteer work, and providing the teamwork in making us one of the best ASSE Chapters in the country! [\*Kudos: 1799, from the Greek "kyddos" meaning glory, fame, renown; the ~s is usually mistaken as a plural suffix in English leading to the barbarous back-formation *kudo*. Now you know]

### **Senate Confirms Edwin G. Foulke Jr. to Lead Occupational Safety and Health Administration**

U.S. Department of Labor (03/15/06) Al Belsky (202) 693-1999

WASHINGTON -- Secretary of Labor **Elaine L. Chao** announced today that the United States Senate has confirmed **Edwin G. Foulke Jr.** of South Carolina as assistant secretary of labor for occupational safety and health. President **George W. Bush** nominated Foulke Sept.15, 2005, to head the Occupational Safety and Health Administration (OSHA). "Ed has extensive knowledge and experience in workplace

safety and health issues that he will put to use to protect workers and promote employer compliance," said Secretary of Labor **Elaine L. Chao**.

As head of OSHA, Foulke will be responsible for administering a comprehensive program to assure the safety and health of America's workers by setting and enforcing standards, providing training, outreach and education; and establishing partnerships and alliances that encourage continual improvement in workplace safety and health.

Prior to his nomination, Foulke was a partner with the law firm of Jackson Lewis LLP in Greenville, S.C., and chaired the firm's OSHA practice group. He served on the Occupational Safety and Health Review Commission from 1990 to 1995, chairing the commission from March 1990 through February 1994. The commission is an independent federal adjudicatory agency that renders decisions in job safety and health disputes arising from inspections conducted by OSHA. A native of Perkasie, Pa., Foulke graduated from North Carolina State University in 1974. He received his Juris Doctor from Loyola University in 1978 and a Master of Law (LL.M.) degree from Georgetown University Law School in 1993. He also served as an adjunct professor at St. Mary's Dominican College in New Orleans.

### **Final Rule Issued on Roll-Over Protective Structures Standards**

OSHA issued a direct final rule that regulates the testing of roll-over protective structures (ROPS) used to protect employees who operate wheel-type tractors. The direct final rule published on December 29, 2005 is effective February 27, 2006. For the purpose of judicial review, OSHA considers February 28, 2006 as the date of issuance. The rule reinstates the agency's original construction and agriculture standards that had been replaced a decade earlier with references to national consensus standards for testing of ROPS. Details and further links appear in the Feb. 28 Federal Register found at [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=FEDERAL\\_REGISTER&p\\_id=18600](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=18600). The Agency [OSHA] uses direct final rulemaking when it expects that a rule will not be controversial. Examples of such rules include minor substantive revisions to regulations, incorporation by reference of the latest edition of a technical or industry consensus standard, and direct incorporations of mandates from new legislation. In direct final rulemaking, OSHA publishes a final rule in the Federal Register with a statement that, unless it receives a significant adverse comment by a specified date, the rule will become effective on a designated date thereafter.

### **Web-based Training Tool Available for Workers in Printing Industry**

Helping workers involved in printing processes stay safe on the job is the purpose of OSHA's new Web-based training tool "Ergonomics in the Printing Industry." This eTool, a product of the Graphic Arts Coalition alliance, focuses on workers who may be at risk of developing musculoskeletal disorders from such workplace activities as lifting heavy items, lifting too often, or working in awkward positions. You may find a whole series of eTool selections at <http://www.osha.gov/dts/osta/oshasoft/index.html>.

### **New Fact Sheet Available on Safety and Health Topic**

The latest addition to OSHA's ongoing series of safety and health fact sheets is "Electrical Safety Hazards of Overloading Cable Trays." The fact sheet focuses on hazards associated with overloaded cable trays, and also provides information on relevant standards and regulations on the issue. Visit the OSHA Fact Sheet page at [http://www.osha.gov/Publications/cable\\_trays\\_fs.html](http://www.osha.gov/Publications/cable_trays_fs.html).

### **OSHA Issues Final Standard on Hexavalent Chromium**

A final standard covering occupational exposure to hexavalent chromium in general industry, construction, and shipyards was published by OSHA in the Federal Register. The new standard lowers the Agency's permissible exposure limit (PEL) for hexavalent chromium from 52 to 5 micrograms per cubic meter of air as an 8-hour time weighted average, and includes provisions for respiratory protection, personal protective equipment, recordkeeping, preferred methods for controlling exposure, and more. Hexavalent chromium is most commonly used as a structural and anti-corrosive element in stainless steel, iron, and

steel production, and in welding and painting, and has been associated with lung cancer and skin disorders.

### **New Web Page on OSHA Challenge Pilot Program**

OSHA recently unveiled a new Web page on the Challenge Pilot program under the Agency's Voluntary Protection Programs (VPP). The page features fact sheets, current statistics, applications, listings of administrators and participants, photos, and more. OSHA Challenge helps companies take a more proactive approach to safety and health by providing an online roadmap that guides them through the steps needed to meet VPP requirements.

### **Training Opportunities**

A certificate from ASSE's Executive Program in Safety Management illustrates a practitioner's commitment to professional development. The program is designed to help SH&E professionals demonstrate safety system success and gain a career advantage. Participants receive the certificate after earning a total of 7.5 CEUs for completing three required seminars (4.9 CEUs) and additional ASSE national seminars or symposia (at least 2.6 CEUs). Visit the National ASSE website at <http://www.asse.org/frexec05.htm> to find further information.



#### **Southern Nevada Chapter**

Presents

### ***Introduction to Industrial Hygiene***

Date: April 27, 2006 – Thursday, 8:00 a.m. – 5 p.m.

Location: Nevada Power  
Wengert Room  
6226 W. Sahara Avenue  
Las Vegas, NV 89151

Cost: **ASSE Members** \$80 Non-Members \$95  
**RIMS Members** \$80

Payment Method: Company or Personal Check

Registration open at 7:30 a.m., includes Continental Breakfast & Pizza Lunch

*Certificate of Attendance and CEU's Available*

ASSE Advance Registration: Email: [dwalsh@converseconsultants.com](mailto:dwalsh@converseconsultants.com) or phone 263-7600 x 2010

RIMS Advance Registration:

Instructor: **Dale Walsh**, CIH, CSP, CEM

Mr. Walsh is widely recognized in the field of Geotechnical Engineering and Environmental Sciences. He is a UNLV Instructor in the Department of Health Physics, and current Board Member of the American Society of Safety Engineers, Southern Nevada Chapter; and the American Industrial Hygiene Association.

[The full agenda for this training is found on the chapter website at [www.asselv.org](http://www.asselv.org)]

### **OSHA Sponsors Second Annual Emergency Preparedness and Response Conference**

OSHA will be holding its Second Annual Emergency Preparedness and Response Conference at the University of Findlay's School of Environmental and Emergency Management in Findlay, Ohio, June 5-6, 2006. This year's theme is "An All Hazards Approach to Health and Safety." The conference offers the opportunity for participants to network with peers, exhibitors, and leaders from industry and government as they work toward ensuring the safety and health of first responders and other workers. Training courses will follow on June 7 and 8. Early registration is encouraged; <http://seem.findlay.edu>.

## **Workers' Compensation Forum in Henderson: "Medical Fee Schedule and Permanent Partial Disability (PPD)"**

We will be providing a Workers' Compensation Forum in the Henderson office on Tuesday, April 11, 2006, from 9:00 am until noon. This specialized forum will cover all aspects of understanding and using the Medical Fee Schedule along with an in-depth look at Permanent Partial Disability (PPD) ratings. Everyone involved in Nevada workers' compensation is encouraged to attend. Additionally, there will be a general question and answer period at the end of the scheduled presentation. This session has proven to be valuable to those who have attended our orientation or have strong backgrounds in workers' compensation and have not been through this presentation previously. Attendance will be first come-first served due to limited seating. If you would like to attend or have someone in your offices who would benefit, please let us know - preferably by e-mail to make reservations: [tsimi@dbi.state.nv.us](mailto:tsimi@dbi.state.nv.us) or call 702-486-9019. Additional sessions of this presentation will be scheduled if needed. Training will be conducted at our Henderson office, 1301 N. Green Valley Parkway, Suite 200, Henderson, NV 89074.

[**Don" Stormy" Stormoen**, Hallier Properties, LLC, Construction Risk Safety Director; mobile (702) 296-1326, Office - (702) 736-4688]

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## **Risk and Insurance Management Society (RIMS), Nevada Chapter**

I'm **Dennis Lindenbach**, President of the Nevada Chapter of Risk and Insurance Management Society (RIMS) and a proud member of ASSE since 1998.

Our RIMS Board Members have agreed that we should look to see how we can work together with your great organization. Dr. **Gloria Heatherington** and I are starting to work together on some possible joint ventures for the future, which will benefit both of our organizations and even possibly the Las Vegas community. More information about this will be forthcoming.

The Nevada RIMS Chapter has several things planned for 2006, to include a Marketing Fair on July 19 and our Fourth Annual Golf tournament on November 16. In addition to these special events, we hold monthly meetings where we have a variety of guest speakers attending. Our monthly meetings are held on the third Wednesday of every month at the Rio Suite Hotel & Casino Convention Center from 11:30 to 1:00 PM. Our last meeting in March we had **Kathy Bryant**, from Willis Group Holding of North America, and **Neil Kaufman**, from Risk Solutions International, LLC, to speak on what businesses need to know and plan for in the event of a catastrophic event and how it can make the difference in folding the business or rebuilding and getting back to business. It was a very interesting topic and in today's world, we need to plan for these types of situations to protect our businesses. Next month we are planning on having a Third Party Administrator (TPA) panel to discuss the topic of the current issues businesses and TPA's face in Nevada. Along with future trends that as business professionals we need to know. So if you are interested in coming to one of our meetings, please feel free to contact **Celeste Graham**, our Secretary, at [graham\\_celeste@hotmail.com](mailto:graham_celeste@hotmail.com) and she'll be happy to give you information about the guest speaker and the topic of discussion. You may visit our website at <http://nevada.rims.org>.

Once again, I am looking forward to working with your great organization in 2006 and beyond.

**Dennis Lindenbach**

President, NV Chapter of RIMS

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## **ANSI Z10 Standard: Legal Perspectives Addressing ES&H Compliance**

ASSE Members:

Greetings, hope all is well, and welcome to Spring 2006.

As you are aware, the **ANSI Z10-2005 Standard** has been a significant issue for SH&E Professionals. This newly developed OHSMS voluntary consensus standard provides critical management systems requirements and guidelines for improvement of occupational health and safety. Participants from labor,

government, professional organizations and industry formulated this valuable standard after extensive examination of current national and international standards, guidelines and practices. ANSI Z10 provides the blueprint for widespread benefits in health and safety, as well as in productivity, financial, performance, quality, and other organizational and business objectives. The seven sections include Management Leadership and Employee Participation, Planning, Implementation and Operation, Evaluation and Corrective Action, Management Review. Appendices address roles and responsibilities, policy statements, assessment and prioritization, audit information, and much more.

One question being asked is whether the standard can be used by national regulatory agencies such as the U.S. Occupational Safety and Health Administration (OSHA). Literally hundreds of questions have come into ASSE about this, so we have put together an article on this issue. Adele Abrams, ASSE's advocate in Washington D.C. is an experienced safety and health attorney and the author of this article. Along with her insights addressing the use of the standard, she also includes some suggestions on what actions SH&E professionals should take into regards to this standard.

We have put together information about the Z10 Standard and the article is currently posted at the link below. If you have not yet ordered a copy of the Z10 Standard we suggest that you do so. The standard can also be ordered at the site below.

<http://www.asse.org/fr3388s.htm>

Thanks and Regards,

**Tim Fisher**, Director, Practices and Standards

## Southern Nevada Chapter Will Play Golf!



The American Society of Safety Engineers (ASSE) Southern Nevada Chapter is seeking sponsorships and donations for two upcoming Chapter events. The first event, coming soon, will be our "1st Annual - Swing for Safety" Golf Tournament on May 25<sup>th</sup>, 2006 at the Painted Desert Golf Course. **(Please see the flyer posted on the chapter website at <http://www.asselv.org>).** The second event will be our Annual Awards Banquet held at the Main Street Station, Social Club, on June 9<sup>th</sup>, 2006 from 6:00 p.m. to 10:00 p.m. As always, chapter members attend free and guests pay a small charge of \$25.00. We are looking for donations of various raffle prizes that we can give away throughout the evening. Last year we gave away a 27" television for our

Grand Prize but we had many other gifts donated by a variety of companies. If you would like to be a part of this event please email our Chapter President, Gloria Heatherington at [drhisin@cox.net](mailto:drhisin@cox.net) or you may call her at (702) 562-0877. Thanks for your continued support of the SAFETY profession here in Southern Nevada! **Rodd Weber**, Membership Chair (Kitchell Contractors, Nevada Safety Director; phone: (702) 734-5334, mobile: (702) 400-0081. [Be sure to visit the Southern Nevada Chapter website, <http://www.asselv.org>, to see the excellent brochure created by **Steve Ross** at the Las Vegas Valley Water District, thanks Steve.]

### A Short Story...

Once, an Engineer, a Physicist and a Safety Officer all applied for the same job. The interviewer questioned all three, and thought all were excellent. He had to think of some way to find the best person. So he told them all to come back the next day and tell him the exact height of the tall building where the interview took place. The one who was closest would get the job! The Physicist went to the top of the building, and dropped iron balls to the ground, and had his friend timed the balls. He did this several times. The Engineer got out a sextant, and computed ratios of a yardstick to the building, etc. The next day, the manager asks all three of them to tell how tall the building is.

"75 feet, 2.8 inches" says the Physicist, with a wide grin on her face.

"76 feet, 4.1 inches" says the Engineer in a precise manner.

"75 feet, 8.4 inches" says the Safety Officer nonchalantly.

"My God!" said the manager, "the Safety Officer got it exactly correct! How did you manage that?" "Well", said the Safety Officer, "I went down to planning department and looked up the height in the building records." [Submitted by **Joe Olson**]

**Crane Injury (Failure to Properly Implement Lock Out/Tag Out Procedures [29 CFR 147, The Control of Hazardous Energy]**

John Epperson and his father is an owner of one of largest crane services in the world. John, his partner Wade and a safety professional conducted an 8 hour training session in Basic Rigging and Crane Signaling. John was a little nervous to start and wondered how best to use these pictures of his hand in this training session.



The instructor used them as an attention step after lunch when the employees were about to dose off. When asked whose hand it was, John pulled his hand out of his pocket. Miraculously, they were able to save his hand as it was almost completely severed. There are some deformities but he has full use of his hand. On top of that, he's very knowledgeable and very, very, safety conscious. After all, who wouldn't be after an accident of this nature?

This accident took place during a crane inspection that John was conducting. Two professionals, trusting one another, while the "other guy" failed to properly perform a specific lockout. John's arm was in this opening to his armpit, and this was the end result of him trying to get his arm out.

**Don" Stormy" Stormoen**, Hallier Properties, LLC, Construction Risk Safety Director; mobil: (702) 296-1326, Office (702) 736-4688

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SPONSORSHIP of the Wednesday, **April 12, 2006** ASSE Chapter Meeting generously provided by:  
(This could be your company's recognition)

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**Chapter Meeting**



Dr. **Gloria Heatherington** shown presenting **Bill Sims**, the speaker at the last chapter meeting, a certificate of appreciation. Bill Sims gave a great motivational presentation on how to obtain the most employee participation in a company safety programs. Lots of interesting tidbits were provided. Attendance at the Chapter Meeting continues to grow in numbers. Another highly successful meeting was made possible by all who attended. If you haven't come to a Southern Nevada Chapter meeting, you've been missing out on some great presentations and meeting lots of people. Hope to see you at the next meeting on April 12<sup>th</sup>!

**ASSE Southern Nevada Chapter Meeting Dates**  
Chapter Year 2005-2006 Confirmed Dates and Location

*Chapter Meetings* now are held in "The Pullman Grille" at Main Street Station, 12 Ogden Street [at Main and Ogden]. A complimentary continental breakfast will be served to all attendees.  
*Executive Board Meetings* now are held at The Riviera Hotel, 2901 Las Vegas Blvd South. Call or email **Mary MacDonald** <mary.macdonald@lvvwd.com>, Executive Board Secretary, for meeting room location.

**Chapter Meetings**  
(begin at 07.00)

**2006**  
April 12 (@ Social Club)  
May 10  
June 14

**Executive Board Meetings**  
(begin at 07.00)

**2006**  
April 26  
May 24  
June 28

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SPONSORSHIP of the Wednesday, **April 12, 2006** Hospitality Industry Committee Meeting generously provided by: *(This could be your company's recognition)*

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**Hospitality Industry Committee Report** Article submitted by **John Willian**

**Suzanne Thomas** from Pacific ADA & It Center gave a presentation at the Four Queens on 3-1-06 on the American Disabilities Act (ADA) and how it affects the Hospitality Industry. The ADA regulations affect every business in Nevada. These regulations require the removal of barriers that would prevent guests with disabilities from obtaining a service that is available to the public. Suzanne Thomas can be reached at phone – 702-386-2995, fax – 702-366-0910, email: [suzthomas@cox.net](mailto:suzthomas@cox.net) Web site: [www.pacdbtac.org](http://www.pacdbtac.org)



**Suzanne Thomas** from Pacific ADA & It Center



Certificate of Appreciation presented to **Suzanne Thomas** by Dr. **Gloria Heatherington** and **Wayne Matherly**



SPONSORSHIP of the March 1, 2006 Hospitality Industry Committee Meeting generously provided by:

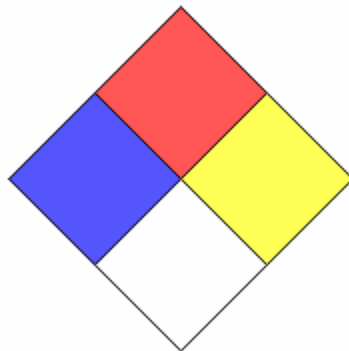
ENVIRONMENTAL HEALTH SERVICES – **Thomas McManus**, CIH, CSP from Environmental Health Services presented the environmental, health, industrial hygiene and safety services that his consulting company can provide. **Thomas McManus** can be contacted at Ph: (702) 645-1521 Fax: (702) 645-0088; e-mail: [tmcmanus@envirohealthservices.net](mailto:tmcmanus@envirohealthservices.net) [Thanks, Tom; who is sitting far left]

Next Hospitality Industry meetings:

April 12 , 2006 Location: Joint Meeting with the Chapter Meeting Room: Pullman Grille Time: 07.00 – 09.00 Speaker: TBA Subject: Company Appreciation Day, "Bring Your Boss" Contact Person: <b>Wayne Matherly</b> (702) 794-9381	May 3 , 2006 Location: TBA Room: Pullman Grille Time: 07.00 – 09.00 Speaker: TBA Subject: TBA Contact Person: <b>Wayne Matherly</b> (702) 794-9381	June 7 , 2006 Location: TBA Room: TBA Time: 07.00 – 09.00 Speaker: TBA Subject: TBA Contact Person: <b>Wayne Matherly</b> (702) 794-9381
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**Safety Quiz: Are you ready for some HazCom?**

1. In which Standard is the diamond symbol (below) addressed?
  - 1a. Can the diamond shape be changed to another shape and still the same meaning?
  - 1b. If you answered "Yes" to question 1a above, what other shape is a valid shape?



2. The four different colors represent what (*need a specific answer*)?
  - 2a. What does Blue indicate?
  - 2b. What does Red indicate?
  - 2c. What does Yellow indicate?
  - 2d. What does White indicate?
3. If the Red Diamond had the number "3" on it, what would this indicate to you?
4. Where is the proper placement of the chemical trade name on this symbol?
5. What must be labeled under the Hazard Communication standard?
6. What basic information must be presented on the label?
7. Which employees have a "Right to Know" about Hazard Communication?
8. What two types of hazards does Hazard Communications address?
9. What are the five key elements of the OSHA Hazard Communication Standard?
10. Do you know where ALL the hazardous materials are located in your place of business?  
(**Try** to answer the above questions first, use the Standard if you must. If you really can't find the answers then take a peek on *page 16* of the "SafetyNet.")

***If we knew what it was we were doing, it would not be called research, would it?***  
**? Albert Einstein**

## Overview of Loss Prevention Principles and Practices

Contributor: **Jitu C. Patel**, CPEA

*Introduction:* This article follows up on the "Basics of Loss Prevention" [published in the March 2006 "The SafetyNet," ASSE Southern Nevada Chapter Newsletter] and sets out approaches to Loss Prevention that may be adopted by any industry. The article discusses the major elements of the overall Loss Prevention Program. These elements and their definitions now are elucidated:

A) **POLICY DECLARATIONS:** It is important that the highest management authority of the Corporation or business consider no phase of Operation or Administration being of greater importance than that of Accident Prevention. It should be the policy of management to provide and maintain safe, healthy working environments and efficient operations. A written policy declaration is displayed for the knowledge of all employees and this policy implementation is assured by the management.

B) **TRAINING:** Second most important element is the Loss Prevention training of all personnel. New hire employees are given an orientation to general activities of the industry with emphasis on Loss Prevention. As a part of this program, they should receive training on safety, First Aid and CPR, fire fighting, use of Personal Protective Equipment (PPE), HazMat handling, and applicable work procedures (especially, permit-required work). Employees are provided applicable refresher safety training on a frequent set schedule basis.

C) **PERMIT-REQUIRED WORK PROCEDURES:** Management must establish certification processes for employees who will use "permits" for safe execution of work tasks within defined hazardous areas. To ensure integrity of the certification process, safety professionals must periodically review the process. Industries are required by OSHA to have permit requirements for hazardous types of hot or cold work, permit-required confined space operations, and other industry-dependent specialty work. Examples of other permit requirements include: "precautionary" permits where the potential exists for an accidental release of hazardous materials, special permits for excavation work, and for work at heights or under water tasks. Compliance of permit-permit required work must be monitored by performing in-field spot checks by safety specialists.

D) **SAFETY INSPECTIONS:** Management must be involved in safety inspections. Inspection teams should consist of members from management, operations, maintenance, process engineering, safety and fire protection. The team reviews procedures, related records, and conducts walk through inspections of the facility to not only verify satisfactory completion of previous items but also to note other additional observations. The inspection findings should be discussed at a subsequent critique meeting and consolidated in a report indicating what is being done well, and what needs the required corrective action (action items).

E) **PREVENTIVE MAINTENANCE INSPECTIONS:** There are many kinds of inspections. "Planned inspections" are systematic searches to follow up on known problems and to identify new ones. Managers do these inspections to focus on program management problems. "Informal Inspections" are done Daily by every one. Other inspections are: Supervisor's General Inspections, Superintendent or Manager's Quarterly Inspections, Fire & Safety Tours by the corporate Executives, Pre-Use Equipment Inspections, Follow-up inspections and Critical Item. Some special inspections, certifications and predictive maintenance programs that have proved beneficial in process industries are:

- On-Stream Inspection Program to record thickness measurements for all pressure vessels, equipment and selected process line circuits for to assure their reliability.
- Relief Valve Inspection Program to monitor and forecast removal of valves, to revise test intervals and to evaluate specific problems.
- Rotating Equipment Monitoring Program on a cycle based on the critical nature of the equipment using state-of-the-art vibration analysis equipment.

- Cranes & Heavy Equipment Inspection Program to inspect and certify all mobile and fixed cranes used in the process or construction industry. Crane operators and riggers should also be certified for a particular crane and load for lifting operations.

F) SAFETY MEETINGS and SAFETY TALKS: Safety meetings and safety talks are considered vital in communicating safety topics, motivating employees, and acknowledging contributions to the Safety Program. Organize a safety meeting at least once bimonthly for facility or plant Operation Supervisors and Lead Operators. Various issues and “lessons learned” must be discussed during these meetings, including operation safety, observations during plant safety inspections, and “near-hit” incidents. Due to the nature of maintenance work, often the maintenance employees are exposed to unsafe conditions or commit unsafe acts. The maintenance department should organize safety meetings preferably at least once every two weeks. At safety talks, the intimate discussion concept is the effective way to educate and update employees with relevant information. Management should recognize outstanding safety talks.

G) SAFETY SUGGESTION PROGRAM: A Safety Suggestion Program encourages employee involvement in Loss Prevention. Employees whose suggestions are accepted by the management should be recognized for their contributions. Implementation of accepted safety suggestions should receive a greater prioritized attention for early benefits. History shows that the implementation of many of these first hand practical suggestions have resulted significant improvement in plant, facility, and personal safety.

H) LOSS PREVENTION COMPLIANCE REVIEWS: Corporate level Loss Prevention Compliance Reviews of the facility should be performed to monitor adherence with industry practices and company safety policy. These independent reviews provide objective feedback on the effectiveness of the Loss Prevention Program. The team should include Operations, Maintenance, and Engineering representatives. Also, included should be the expertise from Electrical or Instrumentation, Rotating Equipment, On-stream Inspector, Crane and Heavy Equipment Inspector, Loss and Fire Prevention Engineer, Industrial Hygiene, Health and Environmental specialists. Compliance Review should include: “On-Site” software procedures, practices and records review, interviews with managers, superintendents and employees.

I) SAFE OPERATIONS COMMITTEE: Safe Operations Committee (SOC) should be chartered to evaluate the Loss Prevention Program and recommend ways and means for improvement. Key issues addressed in such committees are analysis of deficiencies, effectiveness of programs, compliance with corporate general and engineering standards, and the review and follow up of corrective actions accomplished. The Committee should give a great importance in reviewing the incidents, accidents and “near hits” for lesson learning potentials. The SOC Team should include: Department Head as Chairperson; Division Heads of Operations, Maintenance and Engineering organizations; Safety Specialist; Senior Fire Protection Officer; Training Officer, and a Specialist to assist in specific safety issues. The SOC should address the follow-up on safety issues identified by inspections, investigations, compliance reviews and hazard reports. Also, the SOC can review root causes of cited deficiencies; conduct trend analysis of deficiencies in programs, standards, or compliance; review status of safety action items; recognize deserving employees, review disciplinary actions, and examine program changes.

J) CONTRACTOR SAFETY PROGRAM: Another important element of the Loss Prevention program is the Contractor Safety Program. Special care and attention should be given to activities performed by the contractors. Safe execution of any tasks within the process facility is the sole responsibility of the proponent management, regardless of contractor involvement. We are reminded that a few years ago, two major chemicals and petroleum corporations were fined severely by a Texas court for blaming contractors who performed maintenance work on their premises causing multiple fatalities and property damage. Proponents must ensure that the contractors have a good workable safety program, and that is well communicated and is fully implemented. “End of project” evaluation reports are the most essential parts of the program.

K) NON-OPERATING PERSONNEL SAFETY ORIENTATION: It is important that the company management recognizes the hazards and the needs of non-operating personnel who are not familiar with the facility or plant processes and the procedures to follow in case of emergency. Safety awareness presentations therefore should be made on all potential hazards and emergency evacuation procedures for the facility.

L) DISASTER CONTROL PLAN: Every organization should develop a Disaster Control Plan that must define the procedures for obtaining assistance from within or outside the company during disasters. Management must know the functions of essential personnel assigned to control a disaster. At least two drills per annum, one preferably unannounced, are recommended to evaluate the effectiveness of the plan and readiness of the people. Included are fire drills to assure safe and efficient evacuation of a facility or plant.

M) INCENTIVE PROGRAMS: Organizations should develop well-designed safety promotional incentive programs for employees and for the contracting firms who may be involved in major construction or maintenance or repair jobs. Individual and team performance should be recognized by the company to encourage and motivate employees to think and execute safety at all times and reduce losses. Incentives include: Group Recognition, Individual Recognition, Safety Awareness, Safety Bulletin Boards, Special Loss Prevention Displays, and Employee Suggestion Awards. Never misuse a safety incentive program to suppress injury, illness or equipment damage reporting!

N) OFF-THE-JOB SAFETY: Off the Job Safety is very important part of the Loss Prevention Program. It should identify Off-the-Job loss exposures, for example, home safety, recreation safety, and driving safety.

O) TRAFFIC SAFETY: One of the top most important elements of the Loss Prevention Program is Traffic Safety, because almost 50,000 lives are lost and over 2.5m people receive disabling injuries each year costing billions of dollars. On average, 90,000 accidents occur daily in the US resulting in 53,000 claims, 6,300 disabling injuries, and 120 deaths that cost society \$467,000,000 per day, or nearly \$170,000,000,000 per year! Traffic Safety consist of vehicle selection and operation, vehicle inspection and maintenance, driver selection, training and qualifications.

P) ACCOUNTABILITY: A good Accountability Program can help ensure that priority work is completed in a timely manner and prevent duplication or repetition of work. Documentation of work accomplished helps to analyze problems, aid in the defense against claims, provide information for proper recognition of personal efforts, and share information to enhance Loss Prevention.

Q) JOB PLACEMENT: Ensure Pre-Employment Medical Exams are accomplished before hiring or transferring employees. Essential job requirements must be identified. Request medical surveys of work places suspected of having potential for health problems (these "potentials" must be eliminated as much as possible) and, set up personal health monitoring for people with pre-existing potential medical problems.

SUMMARY: The Loss Prevention program outlined in this article is the "tip of the iceberg" and has proved successful in producing favorable results in the field of accident prevention. Many industries worldwide have achieved credible safety performance through clearly defined responsibilities, active employee training, good record keeping and meaningful reporting. Credit for these significant achievements goes to the commitment and dedication of both the employees and the company management working closely with their safety professionals. Develop job procedures to help prevent losses where engineering controls are not possible or practical. Develop safe work practices. Develop general safety rules for common exposures where other accident controls are not practical. Promote compliance with operating procedure, instructions, practices and rules by education and enforcement. Train each employee in the critical job procedures he or she will use. Communication is a key ingredient. The contents of this article are not limited to process industry but they have applicability to construction, hotel or any other industry. This

article has attempted to stress the importance of an effective loss prevention program and also provide "food for thought" for Safety Professionals.

[*Editor's Note:* Mr. **Jitu C. Patel**, CPEA, is currently a member of the ASSE Arizona Chapter and serving the Chapter as a Senior Board Advisor. Jitu may be contacted at phone: (623) 581-8881 or Email: [pateljc2002@yahoo.com](mailto:pateljc2002@yahoo.com). Thank you for your interest in our chapter and your work on the articles you submitted for the March 2006 and April 2006 Southern Nevada Chapter Newsletter, "The SafetyNet"]

## **ANSI/ASSE Z15.1-2006 Safe Practices for Motor Vehicle Operations**

The American National Standards Institute (ANSI) recently gave its approval of ANSI/ASSE Z15.1-2006 "Safe Practices for Motor Vehicle Operations." ANSI fully approved the Z15.1 standard on February 15, 2006 and has an effective date of April 28, 2006. The Z15.1 standard differs from its predecessor, the D15.1 standard "Method of Recording and Measuring Motor Vehicle Accident Experience," in that it provides guidelines for implementing a complete management system for motor vehicle operations. The old standard was narrower in scope and primarily intended to develop means of measuring accidents and comparing accident rates. The new standard does incorporate accident measurement, but it is more robust in providing guidelines for developing and implementing an effective risk management program for motor vehicle operations.

The Z15.1 is developed around a framework of risk elements associated with motor vehicle operations. Basic management structure, driver considerations, vehicle considerations and operational considerations and methods to monitor and measure effectiveness are the foundations of this framework.

The Z15.1 standard should not have a substantial impact on commercial vehicle operations. Most of those operations already have structured risk management programs. However, for non-commercial fleets, the standard can have substantial value. Since motor vehicle accidents are one of the leading causes of occupational injuries and fatalities, a risk management program for motor vehicle operations should positively impact the workplace. Where no formalized efforts currently exist, the standard serves as a user-friendly resource that outlines precisely what is needed to develop a program and better manage this significant exposure. Better management of vehicle operations will lead to improved results. This includes reducing the frequency of collisions, preventing fatalities, injuries, property damage and traffic violations and ultimately lowering costs.

The Z15.1 standard specifies guidelines for driver hiring and training. From a hiring point of view, the applicants' driving behaviors should be considered for employment purposes. Review of their Motor Vehicle Record (MVR) should also be part of the hiring process. Any new employees should be trained to drive defensively upon employment, and to underscore the importance of defensive driving, they should receive regular refresher training. If employees have accidents, receive tickets or behave in some other unacceptable way, remedial training should be provided. The standard prescribes the use of a hiring procedure and training procedures as part of the total risk management process for safe vehicle operations.

The Z15.1 standard identifies the root cause analysis of accidents as a primary basis for measuring effectiveness. In this regard, vehicle safety performance should be considered whenever an accident occurs. If any components or maintenance-specific issues regarding the vehicle contribute to accidents, the organization should identify and address them to prevent future occurrences. The current trend in safety circles is to evaluate whether an organization is doing the right things. One performance measure would be whether or not the organization adhered to all applicable portions of the standard. There is latitude within the Z15.1 standard to account for differences in organizations and their unique operations and exposures. However, in most cases, they are either properly managing a program element or they are not. This is very objective, and it should be relatively easy for management to measure.

The standard provides specific information to assist organizations in analyzing their crash results in order to compare themselves to others within and outside their industry. They will also be able to compare their own results from year to year. While these numbers are trailing indicators of past safety performance, this data will be helpful to safety professionals in promoting and marketing vehicle safety strategies within their organizations or among their members or clients.

This standard's scope sets forth practices for the safe operation of motor vehicles owned or operated by organizations, including:

- Definitions
- Management, Leadership and Administration
- Operational Environment
- Driver Considerations
- Vehicle Considerations
- Incident Reporting and Analysis

These practices are designed for use by those having the responsibility for the administration and operation of motor vehicles as a part of organizational operations.

Z51.1 has generated extensive interest, and during public review of this document there were approximately 80 pages of public review comments and statements. This is a very significant standard for safety and health professionals and interest is very high. If you are a safety and health professional with vehicle responsibilities this is a standard you should have in your technical library. The standard is currently available for purchase at the preferred ASSE member price of \$37. The link will take you to ordering information for the standard: <http://www.asse.org/fr3387s.htm>

**You want ANSWERS?** Ok... here are the answers.

**Answers**, from the **Safety Quiz** on page 11 (NAUGHTY boy, you peeked!)

1. In which Standard is the diamond symbol (below) addressed?

The Occupational Safety and Health Administration mandate (established 1983), Subpart Z—Toxic and Hazardous Substances, 29 CFR 1910.1200 Hazard Communication Standard. National Fire Protection Association's Hazard Identification Coding System commonly referred to as the NFPA Diamond, The National Fire Protection Association (NFPA) has developed a color coded system called **NFPA 704**. The system uses a color coded diamond with four quadrants in which numbers are used in the upper three quadrants to signal the degree of emergency health hazard (blue), fire hazard (red), and reactivity hazard (yellow). The bottom quadrant is used to indicate water reactivity, radioactivity, biohazards, or other special hazards. The emergency hazards are signaled on a numerical scale of 0 to 4, with 0 = no unusual hazard, 1 = minor hazard, 2 = moderate hazard, 3 = severe hazard, and 4 = extreme hazard.

The NFPA diamond is used primarily by emergency response personnel and for emergency planning and as such does not adequately signal occupational hazards or precautionary information. The NFPA system is good for alerting personnel to the degree of hazard of the chemical and helpful in drawing attention to storage needs and emergency equipment needed. The NFPA Diamond by itself does not meet the OSHA HazCom Standard [1910.1200(f)(1); OSHA Standards Interpretation 1910.1200 02/09/94] Whether or not a number and color coding system is used, all Right-To-Know labels must contain at least the following information\*:

- Identity of the hazardous chemical(s).
- Appropriate hazard warnings.
- Target organ warning.
- Name and address of the chemical manufacturer, importer, or other responsible party.

1a. Can the diamond shape ever be changed to another shape and still mean the same thing?

**Yes**

1b. If you answered "Yes" to question 1a above, what other shape is a valid shape?

It may look like a **rectangle containing colored bars**. The National Paint & Coatings Association (NPCA) Hazardous Materials Information System (HMIS) is one of the most popular systems for labeling hazardous chemicals. The system uses standard labels to communicate hazards through the use of colors, numbers, letters of the alphabet, and symbols. The HMIS is a five part rectangle that provides identification of the chemical, acute health hazard, flammability, reactivity, personal protective equipment designations, and chronic health hazard information. The chemical identity is conveyed by the chemical name and should be the same as the name on the MSDS. The acute health hazard reactivity (yellow) hazards are communicated (blue), flammability (red), and by numerical ratings similar to the NFPA system. An alphabetical designation is used to denote recommended personal protective equipment. Chronic health hazards may be any abbreviated technique such as an asterisk communicated by placed on the label denoting reference to the specific Material Safety Data Sheet, or the actual chronic information may be written on the label if space allows

2. The four different colors represent what?

Each colored bar or small diamond represents a different **class of hazard**. The hazard classes found on labels include: Health, Flammability, Reactivity, and in some cases, Special Hazards. Each of the first three hazard classes use a different color and rating scale from 0–4. The fourth hazard class, Special Hazards (White), uses symbols.

2a. What does Blue indicate? **Health Hazards**. The first hazard class is Health Hazards. This hazard class is colored BLUE. The rating scale for Health Hazards is listed below:

- 0 - No Hazard
- 1 - Slight Hazard
- 2 - Dangerous
- 3 - Extreme Danger
- 4 - Deadly

2b. What does Red indicate? **Flammability Hazards\***. The second hazard class is Flammability Hazards. This hazard class is colored RED. The rating scale for flammability hazards is based on the flash point of the material. The flash point is the temperature at which the material gives off enough vapors to sustain ignition. The rating scale for Flammability Hazards is listed below:

- 0 - Will Not Burn
- 1 - Ignites Above 200 Degrees Fahrenheit
- 2 - Ignites Below 200 Degrees Fahrenheit
- 3 - Ignites Below 100 Degrees Fahrenheit
- 4 - Ignites Below 73 Degrees Fahrenheit

2c. What does Yellow indicate? **Reactivity**. The third hazard class is the Reactivity of the substance. This hazard class is colored YELLOW. The rating scale for Reactivity is listed below:

- 0 - Stable
- 1 - Normally Stable
- 2 - Unstable
- 3 - Explosive
- 4 - May Detonate

2d. What does White indicate? **Special Hazards**. The fourth hazard class is called Special Hazards. This hazard class is colored WHITE. These special hazards are represented by the

following symbols:

**W** - meaning "Water Reactive"

OX - meaning "Oxidizer"

**R** - meaning "Radioactive"

COR - meaning "Corrosive"

ACD - meaning "Acid"

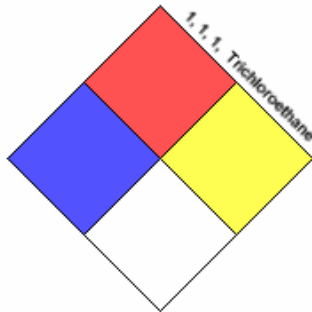
ALK - meaning "Alkali"

3. If the Red Diamond had the number "3" on it, what would this indicate to you?

The rating scale of "3" indicates the substance **ignites below 100 degrees Fahrenheit**.

4. Where does the chemical trade name go, on this symbol?

The chemical trade name of the hazardous substance is properly placed toward the **top of the label**.



1, 1, 1, Trichloroethane	
<input type="checkbox"/>	HEALTH
<input type="checkbox"/>	FLAMMABILITY
<input type="checkbox"/>	REACTIVITY
<input type="checkbox"/>	PROTECTIVE EQUIPMENT

5. What must be labeled under the Hazard Communication standard?

The OSHA Hazard Communication standard requires that **ALL hazardous materials must be labeled**. Labels must appear either on the container itself, the batch ticket, placard, or the process sheets. Hazardous chemicals in portable containers which are for the immediate use of the employee who performs the transfer is the exception to this rule.

6. What basic information must be presented on the label?

OSHA requires that the following information be included on ALL labels: **The product name; A warning statement, message or symbol; and On commercial labels, manufacturers of hazardous materials must include their name and address.**

Many manufacturers also include a statement describing safe handling procedures.

7. Which employees have a "Right to Know" about Hazard Communication?

**All employees have a "Right to Know."** Companies producing or using hazardous materials must provide employees with information and training on the proper handling and use of these materials.

8. What two types of hazards does Hazard Communications address?

Any substance which has been determined to be either a **health hazard** or a **physical hazard**.

9. What are the five key elements of the OSHA Hazard Communication Standard?

The OSHA Hazard Communication Standard is composed of five key elements. These five key elements are:

1. **Materials Inventory** - A list of the hazardous materials present in your work area.
2. **Material Safety Data Sheets** - A detailed description of each hazardous material listed in the Materials Inventory.
3. **Labeling** - Containers of hazardous materials must have labels which identify the material and warn of its potential hazard to employees.
4. **Training** - All employees must be trained to identify and work safely with hazardous materials.
5. **Written Program** - A written program must be developed which ties all of the above together.

10. Do you know where ALL the hazardous materials are located in your place of business?

**Answers will vary**, including:

- a. "Yes, I keep a Materials Inventory and document where hazardous materials are located in my place of business. I also have MSDSs available in the appropriate work areas. I'm ready for an OSHA inspection, bring 'em on!"
- b. "No, I don't keep a Materials Inventory nor do I know where hazardous materials are located in my place of business. MSDSs are too complicated for the average employee to read and understand, therefore, I just hide them in a desk drawer somewhere. Let me tell you something ... OSHA will never visit this place anyway."
- c. "I know where some are, does that count? Besides, I've got too many other things to worry about ... I assume everyone knows what they're doing with any hazardous materials in their work areas."
- d. "Can you repeat that question, please? I don't think I understood what you were asking."
- e. "I don't know." (with a shoulder shrug; this is a third grader's answer!)

\* The two major classifications of fire hazards are combustibles and flammables. The major difference between combustibles and flammables is the temperature at which ignition occurs. Flammables ignite at temperatures less than 100°F while combustibles ignite at temperatures between 100°F and 200°F. This means you must take greater care when handling flammables than combustibles. A combustible is a fire hazard at a slightly elevated temperature, but not at room temperature.

The most effective RTK [*Right to Know*] labels employ a number and color coding system and have the following information written out on the label:

- An index of the number and color coding system.
- Chemical name.
- CAS number.
- Signal word (Danger, Caution, Poison, etc.)
- Health hazard.
- Fire hazard.
- Organs effected by the chemical.
- First aid.
- Emergency numbers.
- Pictograms illustrating protective equipment and dangers.
- Reference to Material Safety Data Sheet for further information.

*Continued from page 2...* **But** after several frustrating minutes, nothing happened. Then a bright idea hit him: "Why not accelerate this painfully slow process?" He took the lamp to the kitchen, placed it on the stove, and turned up the heat. In short order, the wax melted and began its sinuous dance. But the liquid was designed to be warmed by a 40-watt bulb. It was over-heated. Entranced by the display, Philip forgot that "heat expands". Whereas there was no room for expansion in the glass bottle, the Lava Lamp resorted to a violent explosion to relieve the pressure.\*

One thick shard of glass blew straight through Philips's chest and into his heart. Philip stumbled into his bedroom, perhaps uttering "*Aeternum vale!*" (Latin: *farewell forever*) as he collapsed and died.

Police found no evidence of alcohol or drug use, so it is safely presumed that Philip was in full possession of his senses when he went out with a bang.

\* *Why the instructions warn NEVER to place the lamp directly on a heat source, such as a stove!*