The Utility Connection

Message from the Chair

Safety 2012 is in the history books. Another successful Professional Development Conference. I was amazed at the breadth of the concurrent sessions; I would probably fill up the page trying to list them all. I picked up pointers on ways to improve my agency’s fall protection and electrical safety programs. It seemed that everywhere I looked while touring the vendor exhibition I found another seller of fire rate clothing.

The Advisory Committee members in Denver attended the Construction Practice Specialty’s meeting (our sponsoring practice specialty) on Sunday evening. I think they had a record turnout this year. I am pleased to see they are partnering with OSHA to reduce falls in construction. Their Wordless Safety Manual is progressing. They have decided on a format and are pushing ahead with publishing a document in the near future.

The Utilities Branch had its first standalone meeting. Our attendance was double that of last year. We had several new members as well. Speaking of membership, ours is at an all-time high, continuing the steady growth since we were established 3 years ago. Our goal was to exceed 500 members by this past June. We almost made it; membership is currently in excess of 470. This past year’s accomplishments included writing and adopting a Strategic Plan; our first goal is membership growth with retention so that we can become a full practice specialty.

Another objective established was the development and presentation of a webinar. Gary Keith, Conferences and Seminars Chair, is working with Michael Parker, Special Projects Chair, to identify a topic and to select a presenter. If you are looking for a presentation on a particular topic, contact Gary and let him know. Remember, this organization exists for your benefit. We want to give you what you want and need to succeed.

Connie Muncy led a roundtable discussion on the topic of noise and hearing loss. Each of us brought a different perspective to the table. Connie detailed several points in defending a hearing loss claim from a firsthand perspective, reviewing her past experiences at various employers. We were not able to finish the entire presentation; we needed to end the discourse at 7:30 p.m. as we were all very hungry. She has graciously written a multipart article for all of us to learn from that will be included in The Utility Connection over the next several issues.

I hope you all have a productive, and safe, year ahead of you. I expect to meet you at Safety 2013 in Las Vegas.

Stephen D. Brooks
Interview with Michael Caro

Michael Caro, CUSP, is director of safety and training for UtilX Corp., which is headquartered in Kent, WA. In this interview, Caro discusses approaches to safety training for electric utility workers and explains how UtilX promotes its safety culture throughout the company.

Please provide a brief description of your professional background and of your position as director of safety and training for UtilX.

I began my career in the utility industry in 1989 as a lineman and worked for both contractors and utilities. My longest single stretch was with Ameren/UE in the St. Louis, MO, area (15.5 years). In 2006, while still with Ameren, I made the switch from lineman to safety professional when I accepted a position as the safety supervisor at one of Ameren’s coal-fired power plants. Two years later, in April 2008, I accepted a position with UtilX. The director oversees a staff of four safety and training specialists and one quality control auditor. I also interact with the safety leadership of our parent company, Willbros, as well as with directors and managers from the other business units under Willbros. UtilX’s safety and training department is ultimately responsible for all training (both regulatory and job-related) that takes place within the company as well as for developing, reviewing and maintaining all safety programs.

Each member of UtilX’s safety and training department is a fully qualified and experienced journeyman lineman. What other criteria must department staff meet?

Preference is given to persons who also have professional safety and/or training experience.

What methods are used to train UtilX workers—online, classroom, hands-on, etc.? Which approaches seem to work best?

We use a combination of online, classroom, hands-on and on-the-job. Hands-on and on-the-job seem to get the best results, both in terms of retention of knowledge and engagement of employees in the training process.

How often does UtilX provide refresher training to its workers to ensure that they follow proper safety, health and environmental (SH&E) practices and procedures while on the job?

All employees must attend training on regulatory topics, as well as first aid/CPR/AED, at least annually. If deficiencies are noted in an employee’s performance in the interim, additional training may be part of the recommended solution.

How does UtilX ensure that the training it provides contains the most up-to-date SH&E information, particularly when it comes to regulations and standards?

The safety and training staff uses a variety of resources to ensure that we are aware of any changes to regulations that affect our industry. These include paid services, professional memberships and diligent attention to regulatory bodies (primarily OSHA, of course).

How does UtilX ensure that the training it provides contains the most up-to-date SH&E information, particularly when it comes to regulations and standards?

The phrase “utility workers” is a bit too broad in this context. Utility can mean water, gas, electric, sewage/water treatment, etc. or any combination of these things. UtilX is specifically concerned with the electric utility industry, and some differences definitely exist in the hazards faced and the types of training associated with them. Whereas other industries typically only concern themselves with the possibility of electrical contact or electrocution as a peripheral matter, for us, it is a daily fact of life. The chief risk our workers face every day is that of making contact with energized parts that typically operate at voltages ranging from 4,000 to 35,000. We have a regulation that is specific to us (29 CFR 1910.269), which is, incidentally, within about 90 days of being reissued—it just went to the Office of Management and Budget and should be published in the Federal Register in October.

The unique nature of our risk exposures naturally means that we have training requirements specific to our industry. This is especially applicable to the training associated with recognizing the hazards of working around high voltages and energized equipment.
Do UtilX workers have an opportunity to provide feedback on training? How is their input used to improve future training courses?

Every training class, no matter how short or long, is accompanied by a feedback form that allows participants to rate the content, trainers, facility, etc. and asks specific questions designed to solicit feedback that helps us adjust class content and training techniques as necessary to improve the presentations. We review every training class at least once a year and use the feedback forms as part of that process.

UtilX has developed a safety management system that combines rules, compliance, enforcement and recordkeeping with the behavioral aspects of workplace safety. Does this safety management system draw from the ANSI/AIHA Z10 standard?

The Z10 standard certainly contributed to the overall management system—especially where the concepts of employee involvement and continuous improvement are concerned. However, the system itself is based on safety performance standards. Our parent company, Willbros, designs the performance standards that the enterprise expects business units to follow. Then, within the context of the business unit’s industry and specific exposures and risk profile, the nuts and bolts of the management system are constructed—always with an eye on complying with the broad strokes of the performance standards.

Based on your experience, what is the best way to deliver safety training that is fresh, relevant and useful to both new and seasoned utility workers?

The comment we receive most often on our evaluations—and it supports what I have seen in my own experience—is that participants would prefer more hands-on work during training classes. Even if you need to simulate certain equipment or situations, a hands-on scenario is always the best bet. And in the circumstances where it just is not feasible to have a hands-on component, we try to design the courses with plenty of built-in feedback and class participation opportunities. Avoid uninterrupted lecture at all costs.

How does UtilX promote its safety culture from the top down throughout the company?

Our senior staff is the safety steering committee for the company. They (and the company president) are the first word and final authority on our safety programs and safety management system. They are tasked with approval, annual review and continuous improvement of the system. Our company president is a great advocate for safety within the company, both from his office and on the visits he makes to our field locations.

Michael Caro, CUSP, is director of safety and training for UtilX Corp., which is headquartered in Kent, WA. He may be contacted at mcaro@utilx.com.
Heat Illness Prevention

By Stephen Brooks, CSP, ARM, & Larry Brilliant

As temperatures rise, so does the risk of heat illness, a medical condition resulting from the body’s inability to cope with heat and cool itself. Heat Illness can be deadly. This risk is generally the highest for people who work outdoors, and that is why the State of California developed the Heat Illness Prevention Standard several years ago. A recent Google search indicated that only one other state, the State of Washington, had any form of heat illness prevention regulations. Federal regulation will most likely be through the general duty clause. Both the California and Washington regulations are referenced on OSHA’s website.

The best defense against heat-related illnesses and fatalities is prevention. The Heat Illness Prevention Standard, Title 8, California Code of Regulations, Section 3395, Cal/OSHA, requires all employers with outdoor worksites to take steps to prevent heat illness. The four basic requirements of the heat illness prevention standard are:

1. Training: Train all employees and supervisors about heat illness prevention.
2. Water: Provide enough fresh water so that each employee can drink at least 1 quart per hour (= 2 gallons/person/day) and encourage them to do so.
3. Shade: Provide access to shade for at least 5 minutes of rest when an employee believes s/he needs a preventative recovery period. Workers should not wait until they feel sick to do so. Shade must be present when the temperature reaches 85° F.
4. Planning: Develop and implement written procedures for complying with the heat illness prevention standard.

Training
Before employees can work outdoors, employers are required to provide them with heat illness prevention training. This mandatory training for supervisors and employees under the standard includes the following information:

- Environmental and personal risk factors
- Employer’s heat illness prevention plan and procedures
- The need to drink water frequently throughout the day
- Necessity of immediately reporting to an employer any signs or symptoms
- Employer’s procedures for responding to symptoms
- Employer’s procedures for contacting emergency medical services, including alternative modes of transportation
- Employer’s procedures for emergency communications, including emergency response procedures, such as location, local medical services and communication alternatives
- Importance of acclimatization and allowing the body to adjust gradually to work in high heat
- Types of heat illness and the signs and symptoms
- Increasing the number of water and rest breaks

Acclimatization
One training component is the importance of acclimatization or adjusting to physical activity in hot weather. The body needs time to adapt to increased heat and humidity, especially when one is engaged in heavy physical exertion.

Typically, people need 4 to 14 days to adjust fully to significant increases in heat. Cal/OSHA data reveal that most workplace deaths related to heat illness that have occurred involved new employees who were on the job only 1 to 4 days and were unaccustomed to working in hot or humid weather.

The best acclimatization strategy is to allow employees, especially new ones, to adjust to hot weather by gradually increasing to a full work shift and pace. On very hot days, other good strategies include:

- Timing the shift so that more work can be done during the cooler parts of the day
- Using a “buddy system” so that workers and supervisors can monitor each other
- Reminding employees of the cooling benefits of wearing loose-fitting, light-colored clothing and a wide-brimmed hat, when feasible.
Employees should develop a habit of checking the heat index (temperature and humidity) on a regular basis. Pay special attention and be prepared when heat waves are forecasted.

**Water**

The third component of the standard requires the employer to provide employees working outdoors one quart of potable, fresh and cool water per person, per hour. The majority who succumbed to the heat suffered from dehydration. Therefore, it is critical to keep drinking water accessible and remind your workers to drink it frequently. In addition to encouraging employees to drink water frequently, supervisors need to be on the lookout for work situations that interfere with access to water—especially during a heat wave.

A hose bib and hose in someone’s front lawn is not considered access to water. Employers need to plan access to enough water to meet the minimum needs prescribed in the regulation. When working in remote situations, it may be advisable to assign a worker the job of making water available. Water is a key preventative measure against heat illness.

**Shade**

According to the standard, shade means blockage of direct sunlight. Shade is sufficient when objects do not cast a shadow in the shaded area and sufficient space exists for the employee to be comfortable. Shade is not adequate when the temperature in the shaded area prevents cooling. Avoid sources of shade, such as metal sheds or parked cars that are hot from sitting in the sun.

**Planning**

CAL/OSHA requires that when the National Weather Service forecasts temperatures of at least 85° F for the following day, shade structures must physically be “up” by the start of the new work shift.

Under Cal/OSHA’s standard, an employee working outdoors who wants to cool off must be provided with shade for at least 5 minutes at a time. The employer must provide employees access to an area with shade whenever they believe they need a preventative recovery period or when they are actually suffering from heat illness.

The employer may use measures other than shade (i.e., misting device with fans) to provide cooling if these alternative measures are at least as effective as shade. It is recommended that for employees who work outdoors, consider some easy-to-assemble portable sources of shade, such as umbrellas, canopies or other temporary structures. Buildings, canopies and trees all can qualify for shade as long as they block the sunlight and are either ventilated or open to air movement.

OSHA’s [website](#) has an extensive library in both English and Spanish of materials for employers including, but not limited to:

- Illustrated, low-literacy fact sheets for workers
- Worksite posters for employers that illustrate heat illness
- Community posters that list heat prevention tips and provide OSHA contact information
- OSHA’s Heat Prevention Lesson Plan
- OSHA’s Heat Smartphone App, which allows you to check the heat index for your worksite and to see reminders about the protective measures for the specified risk level.

OSHA’s heat illness webpage includes links to Cal/OSHA’s heat illness page as well.

**Sources:** Cal-OSHA, OSHA and NIOSH

**Stephen D. Brooks, CSP, ARM,** is a Safety Officer at San Francisco Water Power Sewer and ASSE’s Utilities Branch Chair.

**Larry Brilliant** is a Safety Officer with San Francisco Water Power Sewer and a member of ASSE’s Sacramento Chapter.
In the News

OSHA 2012 Heat Campaign
From OSHA’s Directorate of Cooperative and State Programs...

OSHA launched its 2012 campaign to prevent heat illness in outdoor workers earlier this summer. To those of you involved in last year’s campaign, we thank you for your support and look forward to working with you again this year. To our new stakeholders, please help us spread the word about “Water. Rest. Shade.” Your efforts are critical to getting this lifesaving message out to the workers who need it most. Last year, OSHA reached more than two million employers and workers. This year, we hope to reach even more.

For our 2012 campaign, we have updated our Heat Campaign website with two new educational materials: OSHA’s Heat Safety Tool Smartphone App and the Employers Guide to Using the Heat Index. We also have educational posters and fact sheets (materials in Spanish here) and will be using social media tools like Facebook and Twitter more aggressively this year. We will also place print billboards in four states (Florida, Texas, Arkansas and Illinois) and electronic billboards throughout the U.S.

Our website also has drop-in art and articles that you can use in your publications and communications with stakeholders. OSHA has staff throughout the U.S. who can provide training and participate in national, state and local meetings. We will send e-mails to update you on our activities and provide informational pieces that you can use in your communication with members and constituents. We will also forward information about our blogs, Facebook posts and tweets for your use.

OSHA Sends Electric Power Rule to OMB
OSHA has sent its draft final electric power rule to the Office of Management and Budget for review. For more information, click here.

Nuclear Safety
http://www.gao.gov/products/GAO-12-465
http://www.gao.gov/assets/600/590430.pdf (highlights)

Nuclear Safety: DOE Needs to Determine the Costs and Benefits of Its Safety Reform Effort. GAO-12-347, April 20.
http://www.gao.gov/products/GAO-12-347
http://www.gao.gov/assets/600/590257.pdf (highlights)

ASSE Scholarships & Grants

ASSE’s Foundation (ASSEF) has released its 2013 Scholarship Program information. Click here for full details. Mail your completed applications postmarked by December 1, 2012 to:
ASSE Foundation, Attn: Adele Gabanski, 1800 E. Oakton St., Des Plaines, IL 60018.

The ASSEF Scholarship Award and Selection Committee will review all applications. Award recipients’ names will be posted on ASSEF’s website on or around April 1, 2013. If you have any questions, please e-mail Adele Gabanski at agabanski@asse.org.

Certification Prep Workshops

Achieving your certification can make the difference between the next opportunity and becoming obsolete. Let ASSE help. ASSE certification preparation workshops give you the best opportunity to pass your exam. We are so confident in our workshops, that if you take the exams and do not pass, you can retake the same workshop for FREE!

Click here for more information.
The ground fault circuit interrupter (GFCI) is a lifesaving device for protection against serious injury or death caused by an electrical shock. GFCI technology was invented in the 1960s by Charles Dalzeil, Ph.D. A misconception is that the circuit must have a “safety” ground to function, but that is not the case. It is designed to monitor the current in the “hot” wire, compare it to the “neutral” and shut off if there is any “leakage.” In 1987, the National Electric Code (NEC) introduced the requirement that all receptacles within 6’ of a sink be protected.

The original leakage threshold was 20 mA and 7 milliseconds (ms) trip time. That is now called a class “B” unit. This level was primarily set by the available technology. Today, reliability has improved and the trip voltage is 6 mA and 4-6 ms. GFCI units were first introduced in the 1968 edition of NEC 70 where Article 100 states that; a “Class A GFCI trips when the current leakage has a value in the range of 4 to 6 milliamps.” The time to trip is critical so as to prevent extended current flow through critical body parts. GFCI must meet the design requirements of UL Standard 943, which has undergone several revisions.

The National Electrical Manufacturers Association estimates that about 9% of GFCIs are not working. That is why it is important to test all GFCI outlets, especially GFCI circuit breakers. Replace failed units with the new self-diagnostic feature, which literally tests and monitors itself by way of the electronic design. With this feature, the ability to provide people protection can now be verified on a continuous basis. It also requires built-in transient suppression to protect internal circuitry from voltage transients.

Another misconception that could prove deadly was the thought that three regular outlets wired downstream were also automatically protected. It was possible to miss wire the downstream such that those outlets were not protected. In addition, if the downstream outlets were correctly wired and therefore protected and the GFCI itself failed, few recognized that only the GFCI receptacle lost power. All those downstream still had power but were no longer protected.

Since July 26, 2006, this device became by code even more so. The first new requirement is referred to as “End of Life Provision.” In the event that a GFCI’s electronic circuitry can no longer provide safe, protected power, it must render itself incapable of delivering power and must provide a visual indicator to alert the user. In addition “A Reverse Line-Load Miswire” requires that incorrectly wired units deny power to the face GFCI and all downstream receptacles.

A new NEC Section 210.8(B) (4) has been added to require all 15 and 20-A, 125 V single-phase receptacles located outdoors in public spaces to be GFCI protected. This is the most far-reaching change in GFCI protection since this applies to any of these receptacles installed in any outdoor space that is used by or accessible to the public. Check and update your protection.

**Howard W. Spencer, CSP**, works for J.A. Montgomery Risk Control and is a member of ASSE’s Penn-Jersey Chapter.

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**Publication Archives**

Practice specialty, branch and common Interest group publications are archived in the Members Only section under Resources. Find past publications for all of the groups you belong to in one place!
OSHA Revised Hazard Communication Standard

By Bill Paolello

With the March 20, 2012 release of the final rule, OSHA has now aligned its 29-year-old hazard communication standard with the United Nations’ globally harmonized system for classifying and labeling chemicals (GHS). The purpose of this revision is to reduce confusion around the hazards of chemicals in the workplace, improve safety training and create consistency in the labels and safety data sheets (SDSs) for all chemicals. While this new rule will have its greatest impact on chemical manufacturers and importers, chemical users, like many Utility Branch members, will also be affected. Full compliance with the standard is June 1, 2016.

Major Changes

Chemical manufacturers and importers are required to:

- Determine the hazards of the chemicals they produce or import. The new standard provides specific criteria to address health and physical hazards as well as classification of chemical mixtures.

- Provide a label that includes a signal word, pictogram, hazard statement and precautionary statement for each hazard class and category. This new requirement is to help enhance the understanding of the hazards of the chemicals, especially for workers with limited literacy.

- Material safety data sheets (MSDSs) are now called SDSs. The SDS will have a new, uniform format for 16 sections that will include disposal considerations, transport information and ecological information.

Transition to the New GHS: Action Items

- Review your chemical inventory.
- Update SDSs as they become available.
- Review and compare the new SDS with the previous MSDS to determine if there have been any changes.
- Review your SDS storage and distribution system.
- Train employees on the new label elements and the new SDS format. There are some changes in classifications ratings under GHS. For example, the most severe rating is 1, and the least severe is 4. That is opposite of both the Hazardous Materials Identification System and NFPA. Effective completion date for training is December 1, 2013.

Additional Information

More information on the hazard communication standard can be found here.

Bill Paolello is the Senior Safety Coordinator at Atlantic City Electric.
Automated External Defibrillator Awareness  
*By Michael K. Carter, CSP*

Did you know that approximately 890 deaths from coronary heart disease occur outside of the hospital or emergency room every day? The majority of these deaths are due to the sudden loss of heart function or sudden cardiac arrest (SCA). In 2001 and 2002, 6,628 workplace fatalities were reported to OSHA; 1,216 from heart attack, 354 from electric shock and 267 from asphyxia. Many of these victims might have been saved if automated external defibrillators (AEDs) were immediately available. Chances of survival from SCA diminish by 7% to 10% for each minute without appropriate resuscitation. After 10 minutes, resuscitation is rarely successful.

An AED is a portable electronic device that automatically diagnoses the potentially life-threatening cardiac arrhythmias of ventricular fibrillation and ventricular tachycardia in a patient. Ventricular fibrillation may be restored to normal rhythm up to 60% of the time if treated promptly with an AED, a procedure called defibrillation. Defibrillation is the application of electrical therapy, which stops the arrhythmia, allowing the heart to reestablish an effective rhythm.

SCA, a leading cause of death in the U.S., is also one of the leading causes of death in the workplace. Add to that the reality that electrocution is a cause of SCA in even a healthy, non-symptomatic adult, and you can understand why the deployment of AEDs by utilities is becoming more commonplace. OSHA has stated in its first aid publication material that “all worksites are potential candidates for AED programs because of the possibility of SCA and the need for timely defibrillation. Each workplace should assess its own requirements for an AED program as part of its first-aid response. Many issues should be considered in setting up a worksite AED program: physician oversight; compliance with local, state and federal regulations; coordination with local emergency medical services (EMS); a quality assurance program; and a periodic review, among others.”

Sudden Cardiac Arrest  
SCA occurs when ventricular fibrillation takes place or when the heart stops beating altogether. Without medical attention, the victim collapses, loses consciousness, becomes unresponsive and dies. Many victims have no prior history of heart disease and are stricken without warning. Some causes of SCA are:

- Heart attack
- Electrocution
- Asphyxiation (loss of consciousness and death caused by inadequate oxygen in the work environment, such as in a confined space)

Reasons for AEDs in the Workplace  
- Workers may suffer sudden cardiac arrest while on the job
- Onsite AEDs save treatment time and can improve survival odds because they can be used before EMS personnel arrive
- A heart rhythm in ventricular fibrillation may only be restored to normal by an electric shock
- The AED is compact, lightweight, portable, battery-operated, safe and easy to use

AED Placement  
- AEDs should be conveniently installed to ensure response within 3 to 5 minutes
- Areas where many people work closely together, such as assembly lines and office buildings
• Close to a confined space
• Areas where electric-powered devices are used
• Outdoor worksites where lightning may occur
• Health units where workers may seek treatment for heart attack symptoms
• Company fitness units and cafeterias
• Remote sites, such as offshore drilling rigs, construction projects, marine vessels, power transmission lines and energy pipe lines

Success Stories
• A 41-year-old worker at a manufacturer of heating and air conditioning systems suffered an SCA at work. After three shocks and CPR, he was revived within 4 minutes. Fortunately, his company had AEDs and trained responders. By the time EMS personnel arrived, he had been resuscitated and was moved to a hospital. The employee survived. (from the American Heart Association)
• A 62-year-old employee of a coatings, glass and chemical manufacturer suffered an SCA after walking up the stairs to her office. Employees in the next office heard her fall and notified the plant emergency response team. She was defibrillated and saved in less than 2 minutes. EMS personnel then arrived to transport her to the hospital. She sent a note to the company after her discharge from the hospital saying she had "no doubt that headquarters spent money wisely." (from the American Heart Association)
• An employee at an automobile manufacturer was working on the production line when he suddenly collapsed, lost consciousness and stopped breathing. Plant security responded, and after two shocks with an AED, the employee’s heart responded and his pulse returned. He is alive today thanks to the fast actions of his coworkers and the company’s emergency response plan, which included AED installation and training. (from the American Heart Association)
• While standing on a fire escape during a building renovation, a 30-year-old construction worker was holding a metal pipe with both hands. The pipe contacted a high-voltage line, and the worker instantly collapsed. About 4 minutes later, a rescue squad arrived and began CPR. Within 6 minutes, the squad had defibrillated the worker. His heartbeat returned to normal, and he was transported to a hospital. The worker regained consciousness and was discharged from the hospital within 2 weeks. (from NIOSH)

Michael K. Carter, CSP, is a Program Assessment Specialist at the Tennessee Valley Authority and Publication Coordinator for ASSE’s Utilities Branch.

National Electric & Gas Utility Links

Air Conditioning Contractors of America
Air & Waste Management Association
Alliance for Competitive Energy
The Alliance to Save Energy
AM Conservation Group, Inc.
American Bioenergy Association
American Coal Ash Association
American Council for an Energy-Efficient Economy
American Gas Association (AGA)
American Gas Cooling Center
American Iron and Steel Institute
American National Standards Institute
American Nuclear Society (ANS)
American Petroleum Institute
American Public Energy Agency
American Public Gas Association
American Public Power Association (APPA)
American Public Works Association
American Society of Appraisers
Are All Risk Perceptions Created Equal?
By Gary C. Keith

First, the term “risk perception” needs a definition. One definition of risk is the possibility of loss or injury. A second definition is someone or something that creates or suggests a hazard. One definition given to me by an experienced employee in the field was “gut feelings or your initial instinct must be followed.”

Perception is defined as a result of perceiving or a mental image. So, together, risk perception is the mental image of someone or something that creates or suggests a hazard with the possibility of loss or injury. Do we all have the same risk perception? The answer is no. Consider this: some risk perceptions are direct results of a willingness to take a chance. Furthermore, having no oversight really hampers risk perception; it renders it a “non-factor.”

Often, workers take risks around hazards unknowingly. In other words, they (individually) do not perceive that an actual risk exists with performing a particular task (this is where a questioning attitude must be cultivated). But, why is that? Several factors come into play to help develop your individual risk perception. Work experience, education, training and even your environment can be factors in developing your risk perception.

“At-risk” behaviors are always lurking at the worksite. Consider this example: jumping from the cab of earth-moving equipment. Let us pretend the operator was raised on a farm working with his family. The mentality on the farm is “git-r-done”—safety is not a topic of discussion. Without giving it any thought on the farm, the operator jumps from the cab of a tractor over and over again with no resulting injury. After all those years of experience working on the farm, the operator begins a job on a construction site. Now the operator is on your worksite and has brought this behavior along with him. You (the foreman) assume that he knows not to jump from the cab of equipment. The lunch bell rings, and the operator starts to exit the cab. Giving it no thought, just like on the farm, the operator jumps from the loose cab onto uneven rocks and twists his ankle, resulting in a fractured ankle and a lost-time injury. This was not the first time he had jumped from a cab, so why did it happen this time? Was his risk perception different from any other operators on the worksite that day? Why were no other operators “jumping” from the cab that day? Was this discussed in the morning’s pre-job meeting?

Training and constant oversight are required to overcome these deep-rooted work behaviors. What used to be acceptable is not any more.

The point is that we (management and peers alike) often assume that since I (crew foreman, for example) see the act of jumping from the cab of equipment (because of training and experience) as an “at-risk” behavior, then you also see it as “at-risk” behavior.

How can you broaden people’s risk perception to help them identify more “at-risk” behaviors inherent to particular work tasks and to reduce their potential for an injury associate with an unsafe act?

- **Operating experience** will help identify “at-risk” behaviors because other workers (including the injured worker) are intimately aware of the behaviors that occurred prior to the injury. This operating experience is a crucial tool to be shared to help prepare all workers (new and veterans) to accomplish the task and to avoid “at-risk” behaviors that they may not otherwise perceive as a risk. Consider documenting operating experience in a post-job review and other company database for easy access years to come.

- **Human performance tools**, such as pre-job briefings (employees must be drawn into the pre-job to have ownership, otherwise it is useless), stop when unsure and the 2-minute rule, are great tools to help workers step back and think about a task they are getting ready to perform and to ensure that hazards are identified prior to
starting the job. Charge employees with being each other’s keeper. Site supervision and management must encourage the common sense use of these tools.

- **Job safety analysis (JSA)** helps workers understand the particular hazards associated with each job step of a particular work task. If all job steps are not identified and listed, then not all hazards will be identified and mitigated. The JSA is an important tool that all workers should be involved in developing. Again, this goes back to the operating experience of workers who have seen “at-risk” behaviors for that particular task turn into an injury. That knowledge and experience are a must for communication to those who may not perceive a hazard or that the hazard is a risk.

Do not assume I perceive the same risk you perceive—tell me!

**Gary C. Keith** is the Conferences and Seminars Chair for ASSE’s Utilities Branch.

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**Body of Knowledge Tutorial**

ASSE’s new Body of Knowledge (BoK) wiki-like searchable database is now available to all members. To help you get the most from this new resource, we are providing a recording of an introductory and instructional tutorial to get you started.

- **Standard Version:** hassevirtualclassroom.org/BOK/index.html
- **iPhone/iPad Version:** www.assevirtualclassroom.org/BOK/media/bokWebinars.mp4

www.safetybok.org

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**Upcoming Live Webinars**

- **Managing Contractor Safety**
  September 12, 2012, 11:00 am-12:30 pm (CDT)

- **Advancing Your Career: From Safety Leader to Business Partner**
  September 19, 2012, 11:00 am-12:30 pm (CDT)

- **10 Reasons Your Risk Assessments Are Inadequate**
  October 10, 2012, 11:00 am-12:30 pm (CDT)

- **Implementing Lockout/Tagout Hazardous Energy Control Procedures: Utilizing ANSI Z244.1 & NFPA 70E**
  October 24, 2012, 11:00 am-12:30 pm (CDT)

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**On-Demand**

- **Workplace Wellness Web Fest**
  Brought to you by the Health & Wellness Branch

- **Rethink Safety**

- **Changing Behaviors**

- **ASSE Global Safety Conference**

- **The CSP Experience**

- **Convergence: The Role of Safety in Sustainability**

- **Best Practices in Fire Safety Virtual Symposium**
  Brought to you by the Fire Protection Practice Specialty

- **"Watch Out!" for Your Organization: A Virtual Law Symposium for Safety Professionals**
Safety 2012 Recap

On June 4 during Safety 2012 in Denver, CO, the Utilities Branch held an open meeting and roundtable. The meeting was facilitated by Utilities Branch Chair Stephen Brooks from San Francisco’s Public Utilities Commission. “This meeting, like this Branch, has grown tremendously,” said Brooks. He explained that in 2009, the Utilities Branch had 2 registered members. As of the meeting date, there were 447 members, only 53 shy of becoming a practice specialty. The Utilities Branch Advisory Committee members who were present each gave a brief introduction and explanation of their roles and responsibilities in the Branch. After the members were finished speaking, Brooks asked the remaining attendees in the room to introduce themselves and to also answer his question, “What do you want from your Utilities Branch?” Several attendees stated “networking” and “input from other professionals” on initiatives they are currently working on. One attendee asked if there could be a published list of Branch members along with contact information. Brooks stated that each publication of The Utility Connection includes a list of new members. He will look into the possibility of getting additional information published.

The meeting also featured a special Hearing Loss Prevention Roundtable. The roundtable was moderated by Utilities Branch Advisory Committee Member Connie Muncy, CIH, M.S. Topics that Muncy discussed included the current hearing loss epidemic, the psychosocial effects of hearing loss, elements of an effective hearing loss prevention program and NIOSH’s Safe-in-Sound Program. Muncy’s presentation will be published in a future issue of The Utility Connection.

Additionally, on June 5, the Council on Practices and Standards (CoPS) recognized Michael Carter, Publication Coordinator for the Utilities Branch. Carter collects and reviews materials for the branch’s publication, The Utility Connection, and thanks to his hard work and high standards, the branch publication has continued to deliver quality content on time and in full. To learn more about the CoPS awards program, visit www.asse.org/ps/awards.

Several Safety 2012 presentations are available on SafetyNet, the social networking site accessible to all conference attendees. If you have not yet signed up for SafetyNet, you can still do so by visiting http://safetynet2012.ning.com and creating a profile.

If you could not make it to Safety 2012, speaker videos can be accessed here. Audio recordings of select Safety 2012 concurrent sessions are also now available for purchase and download. To view available sessions, click here. Proceedings will be available in Members Only soon, so keep an eye out.

Safety 2013 will be held in Las Vegas, NV, from June 24-27, 2013. The Utilities Branch will sponsor several sessions and hold its annual face-to-face meeting so please plan to join us if you can.

Best of the Best

The 2011-12 Best of the Best publication is now available to members of ASSE’s practice specialties, branches and common interest groups. Click here to view this compilation of top technical material.

Visit www.asse.org/ps for more information on the groups represented in this publication or www.asse.org/JoinGroups to get the most out of your ASSE membership by adding a practice specialty.
Welcome New Members

We want to thank everyone who has remained a loyal member of the Utilities Branch and welcome the following members who recently joined. We are currently at 475 members and growing. If you have any colleagues who might be interested in joining the branch, please contact Krista Sonneson to request an information packet. If you know anyone who might be interested in joining ASSE, please contact customer service.

Donald Adkins, Davis H. Elliot Co.
John Aliveto
Christopher Averette, CWA Management & Consulting
Michelle Baber
George Barlow, Quanta Services
Thomas Bayer, Day & Zimmermann NPS
Anasse Benmoussa
Robert Bondeson
Daniel Brady, U.S. Department of Energy Western Area
Power
Calvin Burns, URS Flint
Terry Callendarillo, Bulldog Safety Group
Charles Calloway
Chris Carter
Ian Chase, Slayden Construction
Nathan Clinard, O’Connell Companies
Robert Cook
Aaron Cox
Amy Cypret
Lou Dema
Vito DeMaio
Richard Dresser
Melissa Dunham, Newkirk Electric
Dennis Enright
Neil Feldscher
Michael Fergus, Capital Tower & Communications, Inc.
Todd Ferry, J.F. Electric, Inc.
James Foley
David Franklin
Robert Gilbert
Jesse Hardy
Fengyuan He, Hamilton Sunstrand
Patrick Hickey, Pro Safety Services LLC
Brian Hubbard, NSTAR Electric & Gas
Hubert Hufham
Alan Jennings

Stephen Kauffman, Henkels & McCoy
Chad Kilby
William Kirk, Tennessee Equipment Supply Inc.
Jason Koss, Constructors Association of Western PA
Srbo Lalic, Kiewit
Robert LeRoy
Mark Ling, Sterling Boiler
Michael Malavolta
Langston McCain
Ronald McInnis
Kevin McMahon, American Water
Steve Mondschein, PPL
Michael Monroe, United Service Corp.
Christopher Murphy
Matthew Murphy, John P. Picone Inc.
Scott Nicholson, Commonwealth Edison
Travis Nolan
Donald Palmer
Mark Revesz
Charles Roberts, Burns & McDonnell Engineering
Peter Schmidt, OECs, Inc.
Allen Schultz, M.J. Electric, LLC
Andrew Shapiro
Randy Smith
Adam Stewart, Kentucky Utilities
Todd Stewart
Terrence Sundt
William Thomas, Ni America
James Turner, Par Electrical Contractors
Mark Tylec, WDW Resorts
Marc Victoriano, Energy Services Inc.
Stephen Wehner
Sheryl Wiser
Charles Woodings
Matt Ziska, Xcel Energy

The Utilities Branch membership is free to members of the Construction Practice Specialty ($20). To join, contact ASSE Customer Service at (847) 699-2929 or join online.
Environmental Practice Specialty

The Environmental Practice Specialty (EPS) focuses on issues, such as environmental management, water and air quality, solid and hazardous waste, emergency planning and response practices, chemicals and toxicology, legislative and regulatory monitoring, and expert testimony and resources.

From its start in 1990, EPS has always made an effort to provide its members with opportunities for professional development and recognition through conference events, webinars, guidance documents, its triannual publication EnviroMentor and awards programs. In addition, EPS routinely surveys its members for their input on OSHA and EPA legislation and on hot topics, such as hydrogen as an alternative fuel source and green practices in the workplace. EPS also sponsors the Agricultural Branch.

To join this popular practice specialty, contact customer service at (847) 699-2929 or visit www.asse.org/JoinGroups. If you are an existing member of EPS and would like to join the Agricultural Branch for free, send an e-mail to customerservice@asse.org indicating your interest.

Follow EPS at www.asse.org/ps/environmental and on LinkedIn.

Resources

Body of Knowledge: www.safetybok.org
Journal of SH&E Research: www.asse.org/AcademicsJournal
International Resource Guide: www.asse.org/IRG
Networking Opportunities: www.asse.org/connect
Publication Opportunities: www.asse.org/ps/write
Volunteer Opportunities: www.asse.org/ps/volunteers

www.asse.org/ps/utilities
www.asse.org/JoinGroups

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