

## Working in the Summer Heat

*Although Winter is Said to Be the Cruellest Season, Summer May Be the Most Dangerous for Outside Workers*

By Paul Hull

Many contractors and technicians in the northern states or provinces of North America find that their work is uncomfortable during the shivery winter months, especially when they are perched up on boom trucks or squatting down to fix ground level wiring and cable, so it is not surprising that they look forward to the warmth and sunshine of their summers. Machines and vehicles seem to react in the same way. They never enjoyed starting on cold mornings (though many of yesterday’s engine problems in that area have been solved by most manufacturers) and they sound much more cheerful when they can feel the sun’s warmth on their hoods. In the heat there are, however, dangers for machines, vehicles and their operators. Like machines, people do not function well when overheated.

Heat can cause discomfort and exhaustion, but *heat stroke* is much worse than that. It happens quickly; it can be fatal. If not properly treated, a person with heat stroke can die within one hour. Repeat: The victim of heat stroke can die within one hour. Basically it happens because the body cannot produce enough sweat to stay cool. It dehydrates and stops perspiring. How fast can this happen? For a test, researchers used an automobile on a sunny, hot afternoon. The test was in a state on the east coast but it might just as well have been

in your own community. By using the air conditioner, the researchers brought the interior temperature of the car to a comfortable 75 degrees. *Within 15 minutes* of turning off that air conditioner, the temperature inside the car had risen to 115 degrees, because the glass and steel of the car transformed it into an oven. High humidity seems to make the situation worse.

Here’s what a medical expert says: “Heat stroke is a potentially fatal disorder that generally occurs in people who are not acclimated to hot weather, older people, alcoholics, and in people who take certain medications called anticholinergics,” says Claire Spiro, P.A., assistant professor at Yale University in Connecticut. Her in the field medical experience has been in hospitals and clinics in North Carolina, Colorado, Connecticut, Alabama and Oregon – states perceived with different climates but with similar heat problems occasionally. “Those medications include antihistamines (which dry you out even more), certain asthma medications, or diuretics (water pills). The key difference is that people who have heat stroke don’t sweat or they have impaired ability to sweat because of medications or other neurological problems. Thus, their body temperature gets very high, which can lead to brain damage, heart failure and death. People with heat stroke typically are very hot, have dry skin and generally are confused.”



Spiro suggests that the best prevention could include:

- Frequent replenishment with water containing sodium and electrolytes. There are lots of brand-name drinks out there too, typically sport drinks like Gatorade.
- Taking breaks to avoid becoming overly hot. Try to have a cool area designated at the work site.
- Trying to acclimate to an area *before* working.
- Considering NOT taking your allergy pill (or other anticholinergic

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# Accident Summary For The Month Of May, 2009

	No Lost Time	Lost Time	Days Lost	Employees		Manhours Worked	Vehicles Used	Miles Driven	Vehicle Accidents
				FT	PT				
Ark Valley	0	0	0	16	9	2,815	14	16,684	0
Bluestem	<b>NO REPORT</b>								
Brown-Atchison	0	0	0	15	2	2,669	9	8,566	0
Butler	<b>NO REPORT</b>								
Caney Valley	0	0	0	19	3	3,711	15	18,582	1
CMS	0	0	0	33	10	6,640	32	40,896	0
DS&O	0	0	0	44	0	7,030	32	38,172	0
Doniphan	0	0	0	8	1	1,402	4	3,478	0
Flint Hills	0	0	0	39	0	6,375	23	20,031	1
Heartland	1	0	0	39	5	8,679	26	43,979	0
Kaw Valley	0	0	0	34	19	6,677	19	26,508	0
Lane-Scott	0	0	0	26	4	4,803	25	19,235	0
LJEC	0	0	0	39	5	7,879	29	22,946	0
Lyon-Coffey	<b>NO REPORT</b>								
Nemaha-Marshall	0	0	0	19	2	3,275	12	11,260	0
Ninnescah	0	0	0	21	0	3,511	15	13,654	0
Pioneer	0	0	0	64	4	13,576	37	58,153	0
Southern Pioneer	0	0	0	44	3	8,398	34	35,523	0
Prairie Land	<b>NO REPORT</b>								
Radiant	<b>NO REPORT</b>								
Rolling Hills	0	0	0	54	2	10,283	39	49,466	0
Sedgwick County	0	0	0	18	0	2,922	14	11,116	0
Sumner-Cowley	<b>NO REPORT</b>								
Twin Valley	<b>NO REPORT</b>								
Victory	0	0	0	79	7	14,782	51	45,424	0
Western	1	1	**TBD	56	0	9,626	33	40,539	0
<b>Total</b>	<b>2</b>	<b>1</b>	<b>**TBD</b>	<b>667</b>	<b>76</b>	<b>125,053</b>	<b>463</b>	<b>524,212</b>	<b>2</b>

\*Accident Previously Reported

FT=Full Time PT=Part Time

\*\*To Be Determined

# Accidents for May, 2009

**May 11, 2009**

Western, WaKeeney

**Injury:** Sprained right knee.

**Cause:** Cooperative employee stepped in tire track getting off the back of truck and sprained right knee.

**Lost Time:** No

**May 12, 2009**

Heartland, Girard

**Injury:** Small puncture in neck.

**Cause:** Cooperative employee working 15 feet aloft, dropped a nail that struck the neck of an employee on the ground.

**Lost Time:** No

**May 12, 2009**

Bluestem, Wamego

**Injury:** Sore and swollen little finger.

**Cause:** Removing copperweld wire from pole, wire caught finger on left hand and bent finger sideways.

**Lost Time:** No

**May 13, 2009**

Caney Valley, Cedar Vale

**Vehicle Accident:**

Cooperative employee backed into tree limb at member's location, breaking the fiberglass basket on the bucket unit.

**Lost Time:** No

**May 28, 2009**

Bluestem, Wamego

**Injury:** Bruised and sore left hand.

**Cause:** Cooperative employee was clearing tree from line, tree limb came down and struck employee on the left hand.

**Lost Time:** No

**May 28, 2009**

Western, WaKeeney

**Injury:** Right arm popped at elbow.

**Cause:** Cooperative employee was tightening a pole top insulator when employee's arm popped at the elbow.

**Lost Time:** To Be Determined

## Upcoming Events

### KEC Hot Line Schools

September 15-17, 2009, (Pratt Vo-Tech)

(Note: Date Change Due to Labor Day)

September 22-24, 2009 (Manhattan Vo-Tech)

For more information, visit [www.kec.org](http://www.kec.org)

### Kansas Line Superintendents Meeting (Wichita)

September 17-18, 2009

### Administrative Conference (Wichita)

November 17-19, 2009

## Safety Summary

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# Summer Heat

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medication). Check with your physician as to whether or not this is okay.

- Knowing the warning signs of heat exhaustion and heat stroke: muscle cramps, extreme heat, confusion, dizziness etc. If these symptoms occur, get out of the heat.

Spiro adds that, ideally, work sites should have a plan for dealing with heat exhaustion and heat stroke but recognizes that such procedures are more difficult when the workers are constantly going from site to site in their utility trucks. "Be prepared to cool a worker down with ice and cold water taken along on the route, if that is practical," she adds. "At the very least, be able to call for emergency help and arrange for transport if needed." She also pointed out the dangers may be greater for lone workers whose jobs (in electric power, telephone and CATV) take them to remote places, with no companions. Workers who face those situations should be especially careful and thoroughly trained about the dangers and prevention of heat stroke.

A good air flow for the operator of a closed machine or vehicle is essential, then, but also encourage your operators and technicians to drink plenty of water. It may be a good idea to have a supply handy for them. Keeping a bottle or jug of water in the cab makes sense (and it does not have to be an expensive brand name water!). Cabs with air conditioning are becoming standard now, but not everyone has that luxury. Some of us remember the 4-70 automobile air conditioning of yesteryear: four windows down and 70 mph. Some drivers still rely on similar methods. If you notice a worker who is sweating profusely, make sure he or she is drinking enough water to match the loss of liquid, because the body can only produce sweat if it has the water to do so. "Sports" drinks can be helpful, too, because they replace electrolytes.

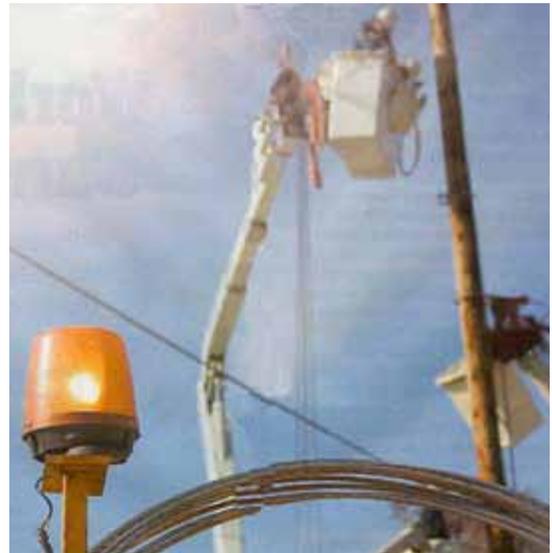
## What about clothing?

What you wear affects your efficiency in the sun, too. Being

fashionable has never been a major factor in deciding what you wear for outside construction or utility work. Loose fitting, light-colored clothing is best because dark colors absorb the heat and light of the sun, and tight clothing restricts the body's ability to breathe naturally and cool itself. Here's a point that we would never have thought of! A hat can shield you from the sun but, if you start feeling too warm, it is better to remove any head covering (*unless it is required for safety's sake*). There are

ways to remain cool and still keep your hat on. Experienced workers say you can sometimes soak towels or cloths in cold water and wrap one around your neck or inside your hat. Bullard and others offer hot weather accessories for their comprehensive ranges of hardhats and caps. Check with your safety equipment supplier. The cool towels help keep your body temperature down. Another way is a vented hat. MSA (in Pittsburgh, Pennsylvania, since 1914, and whose V-Gard® Hard Hat is the number one model used in construction and industry worldwide) manufactures the Advance™ Cap (hard hat, meets ANSI Z89.1 2003 for Type 1 helmets) in vented styles. The company issues a word of caution on this headgear: "While the vented model gives improved air circulation, the nonvented model shall be worn where dielectric protection is needed." On the vented hats, the cooling vents are along the crown. Your best move is to contact your safety equipment supplier and to find the headgear that serves best for your specific applications.

For those workers who go through wooded areas, there are other summer dangers. "Take precautions against ticks and mosquitoes," advises Dr. John DeGhetto, family physician and director of the Family Residency program at Barnett Hospital in Paterson, New Jersey. "Wear long-sleeved shorts and pants and tuck your pants into socks or boots to keep ticks away. Apply insect



repellent containing DEET to clothes and exposed skin to protect against ticks (that can cause Lyme Disease) or mosquitoes (that may carry West Nile virus). Inspect yourself after work every day to check for ticks. Embedded ticks should be removed by using fine-tipped tweezers and, after removal, clean the area with an antiseptic."

"Wearing sunglasses is an excellent idea," adds Claire Spiro. "Ultraviolet rays have been linked to eye conditions like cataracts and macular degeneration. For anyone who is outside for several hours each day, wearing sunglasses with UV protection is a necessity." Among other advice from medical correspondents, we found that avoiding alcohol, caffeine and nicotine is beneficial. A morning cup of coffee can reduce the body's ability to release heat. Coffee, in particular, can serve as a diuretic. Using sun block is high on the list of good practices for outside workers. Don't forget the back of your neck! "Dark-skinned people can suffer from sun problems, too," commented several doctors. "If this medical advice seems to take some of the fun out of being outside, just consider the alternatives," agreed our experts. There are about a million cases of common skin cancer reported each year.

This article was published in the June 2005 edition of *Utility Products* magazine.

# Mind the Gap – Overcoming the Biggest Hurdle in Safety

By Carl Potter, CSP, CMC  
and Deb Potter, PhD, CMC

One of the biggest mysteries in hazardous work is why well-trained people do not follow their company's safe work practices. After years of research, the answer is becoming clear. Consider the following statement: "The gap between knowing and not doing is much bigger than the gap between knowing and not knowing."

The "knowing – doing" gap boils down to something quite basic. The gap between knowing and not knowing is easily overcome through training and education. The tough gap to overcome comes when people know something yet they don't do it or apply it.

It's not hard to see examples of the "knowing –doing" gap in the workplace. Consider the group of oil company executives who couldn't figure out why workers who know the rules simply don't follow them and then blame the company when injuries occur, or the group of emerging leaders in the utility industry - leaders who had come up through the ranks and are now faced with supervising the people they

worked alongside – the ones who continually took short cuts. Unfortunately, the gap becomes all too real when investigating a workplace fatality in which the victim failed to follow basic safe work practices that could have easily prevented the incident.

If you've ever been to London and used the underground transit system, you've no doubt heard the recorded voice loudly proclaim "mind the gap" to remind embarking and disembarking train passengers about the space between the platform and the train. It's as if we need to have the voice to remind us to mind the gap between worker's knowledge and their actual performance.

It's essential that leaders recognize, and then do something about the gap. Think about your own workplace and answer to following questions:

1. What evidence of a gap in worker knowledge and application exists? *Often leaders don't look for the gap and therefore don't know that it exists.*
2. How are supervisors trained to deal with situations where workers aren't accurately applying safe



**Carl & Deb Potter**

work practices? *Remember that supervisors are often people who have come from the workforce and may not be trained in how to handle such situations.*

3. When is the last time your organization's safe work practice training curriculum was reviewed for relevance and interest? *Outdated and uninteresting training can create apathy toward learning and will lessen the opportunity for appropriate application of safe work practices.*

As you consider your own workplace and find that you have room for improvement, the four guidelines provide some steps you can take.

## Four Guidelines to Close the Gap

1. Involve a cross-section of employees in a review of your current safety rule documentation. Ask them what problems they know of with clarity or application of stated rules.
2. Get a copy of your safety manual or accident

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# Mind the Gap – Overcoming the Biggest Hurdle in Safety

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prevention book and a yellow highlighter. Mark every instance of the words “shall” and “will”. These words, while similar, carry different weight. Shall means “without deviation” and the word “will” generally indicates a guideline. Can workers reasonably follow the rules that contain the word “shall”? Be sure that you ask the involved workers.

3. Use a safety expert to review the OSHA rules that are applicable to your industry. Does your safety manual include all these rules and, more importantly, are your employees aware of the proper application of these rules and the safe work practices for your organization?
4. Establish employee-management safety councils in your organization. Employee participants represent their peers and have access to management to discuss safety concerns. When management demonstrates their

commitment to listen to and address issues promptly, such groups can be highly effective.

Do whatever it takes to ensure that everyone throughout your organization knows the applicable rules and how to apply them to their work so you can have a workplace where everyone can go home every day to their families without injury. It’s all about application. It’s just that simple. One of the most important jobs of a leader – whether a crew leader or a company president – is to guide people to apply appropriate knowledge. Take time to first consider if you’re applying what you know about safety then look around. Ask yourself what you can do help others apply what they know.

*Carl Potter, CSP, CMC, CSP... The Voice of Safety<sup>SM</sup>... works with organizations that want to create an environment where nobody gets hurt. As an advocate for zero-injury workplaces, he is a nationally-renowned safety speaker, author, and advisor to industry. For information about his programs and products, see [www.potterandassociates.com](http://www.potterandassociates.com) or contact him at Potter and Associates International, Inc. 800-259-6209 or [carl@potterandassociates.com](mailto:carl@potterandassociates.com). Deb Potter, PhD, CMC is a researcher, author, and speaker in the area of safety management. She is the author of “Simply Seamless Safety.”*

# ***Wanting You to Go Home Every Night to Your Families With What You Came to Work With: PRICELESS***

**By Paul Hebert**

Many of you have been in the power line industry for a lot of years, and have seen a lot of changes. There is more concern for safety, because there are more incidents. An accident is something which is not preventable. Accidents could be considered acts of God, as there is nothing one can do to prevent them.

In earlier years, everyone in the power line business had a lineman background. I believe line work is a hands-on trade, and that most of it is practical knowledge and experience. Young linemen always learned from older, seasoned linemen.

I believe there is a shortage of knowledge and experience now that linemen who have many years of experience are retiring. Once these seasoned linemen retire, their experience is lost forever. Keep in mind that your employees are the most important assets a company can possess; tools and equipment can be replaced, people can't.

We now see younger lineman, with only four or five year's experience, in charge of crews. They may have a

journeyman lineman's ticket, but understand that line work is a very dangerous trade. There are no second chances; their first mistake could be their last one. They may not die, but it will change their lives forever.

Why are linemen having so many incidents? Is your company being complacent? Do your employees get in a hurry? Are they letting their guard down? Remind them to try to stay alert and avoid shortcuts. Create, and implement, a pre-job planning process.

Tailboard meetings can identify, eliminate, and control hazards. These meetings are very important; I know they seem repetitious, but knowing what your job tasks are is important. A lack of knowledge and experience can get a person injured. We can explain how to identify, eliminate, and control hazards, but do they have enough experience to complete such tasks, do they comprehend the dangers?

I know many of you have military training. In the military, they brief before they go into action, and debrief after returning from action. Linemen should do the same thing: brief beforehand, debrief after.

Debriefing (tailboards) can become your safety meetings on what went right and what needs to be corrected. Give positive points first. Build morale; never give bad news first. Always praise your employees for their good work and problem-solving. Focus on the solution, not the problems. This is what we should use safety meetings for: positive reinforcement. Remember to never single people out. If necessary, solve problems one-on-one to avoid humiliating someone in front of their fellow workers.

Since 2001, over 3000 soldiers have died in Iraq. In the United States, we lose 17 construction workers per day. In the line trade, we lose 45 to 55 linemen per year. This is not counting the injuries, the amputations, and the mutations. We know where the hazards are. Please respect electricity, because this is an energy you cannot see. Once you are too close, it's too late.

This is why I believe you have to look after yourselves. A safety commitment has to start with each and every one of us. We have to look at our lives as the most important investment we possess; if you lose your

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# ***Wanting You to Go Home Every Night to Your Families With What You Came to Work With: PRICELESS***

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life, you lose everything. Your spouse, your children, your friends and coworkers all pay the price when you have a serious accident. You only have one life. Why would you want to throw *it* away by disregarding safety?

This is why you should use your first means of defense: identify, eliminate, and control hazards. It's best to eliminate hazards before something serious happens. Your first means of defense go hand-in-hand with your last means of defense: use your PPE safety glasses, hard hats, safety work boots, rubber gloves, dielectric boots, and ground mats.

If you forgot to identify, eliminate and control hazards, hopefully your last means of defense will protect you from injury. All are designed to

protect you in case something happens. If the situation changes suddenly, those are the things that are going to save your life.

Make sure you are also aware of your company's emergency rescue plan; do not let yourself or one of your coworkers become a casualty. If one of your linemen is electrocuted, do you know the proper procedures? Make sure all workers are trained in first aid, CPR, and that they are aware of their land location and directions to the work site in case they need to call 911. Teach them how to assess if it will be a pole-top rescue, a tower rescue, or if it is a bucket rescue.

There are two reactions when a person panics: fight or flight. If you panic, your first

instinct is to run away, and you are no good to your coworkers in a rescue situation. If you are prepared with the tools you need, you will stay, help, and fight for that person's life.

Practice your rescue plan, time and again, run mock drills. Make sure that you and your employees are prepared for the worst. Hopefully, you won't need to use your emergency plan; hopefully, at the end of the day, every employee will go home to their families with what they came to work with.

Today is the most important day for the rest of your life.

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# Accident Discussion

Subject: Electrical contact inside URD transformer  
Purpose: To prevent electrical contact in URD transformers  
Originated by: David Morrison

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**Job:** Crew working outages after lightning storm

**Time:** 11:45 p.m.

**Crew:** One 2-man crew  
One 1-man crew

## **Situation as Reported:**

1. Two-man crew was working outages after storm.
2. Two-man crew arrived at location of single residential outage.
3. They opened underground transformer and found primary H-1 bushing smoked.
4. They did not have a bushing with them so they called for another crew to bring one and to change it out.
5. Two-man crew did not test for voltage.

## **Accident Sequence:**

1. One-man crew brought bushing to transformer.
2. He opened transformer and reached in with leather gloves to pull elbow off bushing.
3. He contacted 7,200 volts.

## **Injuries Sustained:**

He lost right hand to just above wrist.

How could this accident have been prevented?

## **Discussion Points:**

1. Rubber gloves from lock to lock on underground transformers that have not been proven dead and grounded.
2. Communications from crew to crew.
3. Taking things for granted when working on any electrical system.

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