

### Safety Culture

Mark Banister

Last December, a laboratory researcher at UCLA died from burns resulting from an accident in the lab where she worked. This accident has spurred comment and reaction far beyond the terrible tragedy of the death of a university researcher. The state occupational safety regulators have found many troubling things that few universities can say they do not also have. The worker was not properly trained in the activity being performed nor was she provided with the appropriate personal protective equipment. Most troublesome, though, is that the school was also cited for failing to correct deficiencies noted in a previous safety inspection, including that, at that time, workers were found not to be wearing proper protective equipment.

In discussions with our counterparts at other universities all over the country, we find this last part (the fact that deficiencies found in past inspections were not corrected) extremely disturbing. Among ourselves, we are looking more strongly at what we call the Safety Culture—the importance of incorporating both safety practices and safety responsibility into the daily activities of all people working under potentially hazardous situations. Most bluntly, this means that everyone has a responsibility for safety in a work area—not just the workers but also the supervisors, research leaders, professors, department heads and on upwards.

Never assume that something has been done without confirming it. Not that everyone has been trained, not that inspection deficiencies have been corrected, not that everyone knows what protective equipment to use.

Do not assume that a safety problem is not your responsibility. If a problem relates to someone else's work, point that out to the responsible supervisor and follow-up to see that it is done. If something spills, clean it up even if you didn't do it. If you see something unsafe, note it to the supervisor. Supervisors, principal investigators: do not just ensure that problems are followed up on but impress on your people that their safety performance is important to you just as their performance in other ways is.

Remember that EH&S is always available to help you in developing a better Safety Culture. Contact us if you wish us to help.

And by the way, CRIMINAL penalties in the UCLA accident are still a possibility.

### Guidelines for Using Perchloric Acid

Jeffrey Harris

Perchloric acid (HClO<sub>4</sub>) is a strong mineral acid. Under some circumstances it may act as an oxidizer and/or present an explosion hazard. Guidelines for its use are posted on the EH&S Website ([www.cmu.edu/ehs](http://www.cmu.edu/ehs)). Also, please notify Chemical Safety at ([jjharris@andrew.cmu.edu](mailto:jjharris@andrew.cmu.edu)) if you are using or plan to use perchloric acid in your laboratory (respondents will be entered in a safety raffle).

*Concentrations <60%* may be safely used in a standard wet chemistry fume hood. Again, follow the guidelines posted on the website.

*Concentrations >72%* may ONLY BE USED COLD in a standard wet chemistry fume hood. **If Heating, you MUST work in an approved wash-down fume hood**, or by an EH&S Approved Process whereby vapors are captured or contained (contact above email if needed).

*Anhydrous perchloric acid (> 85% concentration)* is very unstable and will usually explode when it comes in contact with organic materials. **Pre-approval is required, contact EH&S at 8-8182.**

The following materials are **not recommended** for use with 72% perchloric acid: Nylon/polyamides, Dynel/modacrylic ester, Dacron/polyester, Bakelite, Lucite, vegetable-based Micarta, cellulose-based lacquers, copper/brass/bronze (which form shock sensitive salts), aluminum (dissolves), high nickel alloys (dissolve), cotton, wool, wood, and litharge (glycerin and lead oxide).

### Mock Gunman Drill Held at Whitfield Hall

Jim Gindlesperger

EH&S and University Police recently conducted a mock drill at Whitfield Hall simulating a gunman in the building. An EH&S employee played the role of an irate former employee who returned to the building with a weapon.

Building occupants were given an opportunity to offer their comments after the drill, and even though they had been advised in advance that the drill would be conducted, many expressed surprise at how threatened

they felt, particularly when the "gunman" pounded on their doors and told them it was safe to come out.

A great deal was learned about how the procedures worked, and a number of improvements were implemented as a result of the drill. It also provided the building's occupants with the opportunity to experience a serious incident in a controlled setting, enabling them to monitor their emotions and reactions and to test their survival skills. If your department or building would like to conduct a similar drill, please contact EH&S at 268-8182.

Meanwhile, go to [www.cmu.edu/ehs](http://www.cmu.edu/ehs) and click on Emergency Response, then click on Video – Self Protection From Campus Gunman to view the instructional video on how to protect yourself if a gunman should appear on campus.

**To Reach Us**  
Telephone: 268-8182  
Fax 268-7871  
Web: <http://www.cmu.edu/ehs>  
Offices: FMS Bldg., 3<sup>rd</sup> floor

### Unlocked Doors

Jim Gindlesperger



One of the primary goals of EH&S is to promote a positive and safe work environment. We are fully committed to making sure everyone goes home safely at the end of the day. However, we need the help of the campus community to effectively reach that goal, and a recent report from University Police indicated that we are not getting that help to the extent that we should.

Police reported to EH&S that they found unlocked doors on 282 occasions in the month of May. Some of these doors led to labs where dangerous chemicals could be accessed, others to areas where mechanical equipment could present a danger to anyone

unfamiliar with the room. There were also unsecured areas containing confidential information.

In addition to the obvious security breaches and potential exposures to dangerous materials and conditions, these unlocked doors presented an open invitation to theft. Thefts from offices and other areas on campus are increasing, and universities have already been targeted by terrorist organizations as being easy sources of chemicals and radioactive materials simply by virtue of their open nature. We don't need to make it easier for them.

Perhaps more disturbing was the fact that many of the individual doors were found to be unlocked on several occasions. Floor marshals for all buildings have been alerted to the findings and have discussed them with personnel in their respective areas. Even if you haven't been contacted, please make sure that you and everyone in your area are as safe as possible by keeping unoccupied areas locked at all times. If the locks don't latch properly, please submit a work order to get the necessary repairs made. Your cooperation in this matter will enhance the safety at CMU.

### Coming this Fall . . .

*Jim Gindlesperger*

EH&S will be sponsoring an Emergency Awareness Day this fall, with informational tables, live demonstrations (some that will be quite dramatic!), and opportunities to register for free emergency services. More information will be provided in our October issue.

### "Who Reads These Safety Articles Anyway?" Results

*Michael Fouch*



Congratulations to Steve Kalinowski for winning the \$25 Giant Eagle gift card. Steve's name was picked at random from a total of 77 entries. Several of the emails I received contained positive comments about the Lifeline, which was greatly appreciated. A few actually contained experiences from readers about what happened when they didn't read

the safety or operating instructions before trying to operate a particular piece of equipment. This is exactly what the Lifeline is supposed to do, make people think and reflect about the articles and in the process hopefully save someone from an injury or at least an embarrassing moment. Thank you for reading the Lifeline and please feel free to send us your comments anytime.

### Time to Rehydrate!

*Jim Gindlesperger*

Staying hydrated during the hot summer months is easier said than done. The average person needs to drink at least two quarts of water daily, and that amount may increase depending on how fit you are, your level of activity, the temperature or humidity.

During periods of exertion the body tries to cool itself through the perspiration process. However, sweating also tends to remove salts and electrolytes from the body, leading to potentially dangerous dehydration. Symptoms of dehydration include cramps, rapid but weak pulse, shallow breathing, or cool, moist skin. Severe dehydration can lead to heatstroke, a life threatening condition.

Most of us drink when we are thirsty, but by then it may be too late. Dehydration has already begun at that point. Everyone should drink about 7 to 10 ounces of water for every 10 to 20 minutes of exertion for efforts lasting less than an hour. For longer periods of exertion, consider an electrolytic sports drink. These drinks are formulated to not only keep you hydrated but also to replace electrolytes lost through the body's sweating process. Maintaining a balanced electrolyte level is important for efficient muscle activity and maintaining energy levels.

So, drink water or a sports drink before and during periods of exertion, and enjoy the summer!

### Flood Cleanup Tips

*Andrew Lawson*

The Greater Pittsburgh area was recently hit with severe storms that led to flash flooding. Although the heavy rain may have ceased, the cleanup process can be long and arduous. In addition you may face a number of hazards such as; bacteria and viruses, chemical hazardous, electrical hazards and fire hazards during the cleanup process. As a result of these risks, here are some tips on

how to clean up should you be affected by heavy rains and flooding in the future.

- Make arrangements with your physician to receive the Tetanus vaccine if you have not received it within the past ten years
- If you have any open wounds or a weakened immune system you should not work in and around areas that have been flooded
- Wear durable rubber gloves, safety glasses, watertight boots (preferably steel toe) and watertight pants (Dusts masks may be needed as the debris dries)
- Use warm soap and water followed by a 1:50 (1 part bleach 49 parts water) dilution of bleach with water to clean and decontaminate areas and items
- Dispose of all porous items such as cardboard, upholstered furniture and paper that cannot be decontaminated in closed garbage bags or other closeable containers and disposed of via the sanitary trash.
- Open wounds that result during the cleanup process must be cleansed with soap and warm water. In addition, you should contact your physician to receive the Tetanus vaccine.

By following these steps you can help to protect yourself from illness or injury during the flood cleanup process. If you have any questions, please contact the Department of Environmental Health and Safety at 8-8182.

### Radiation Safety Officer Leaving

*Jim Gindlesperger*

This is one of those "good news-bad news" stories we all hear about. The bad news first: John Zoll, who has served as our Radiation Safety Officer since 2005, will be leaving us to accept a position with Bruce Power in Tiverton, Ontario. While we all hate to see John leave, the good news is that this is a great opportunity for him. We wish him the best as he embarks on a new venture. We know he'll do well.