
ENVIRONMENTAL HEALTH AND SAFETY

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Volunteers Ready to Help in Crisis

As an outgrowth of work by emergency preparedness coordinator Shelby Slater and the University Crisis Management Team, Physical Plant's Brad Frewin and Cathy Horton organized the first University sponsored CERT training in July. Community Emergency Response Teams (CERT) are a critical part of efforts by the federal government to prepare citizens for disasters.

When a major crisis overwhelms emergency services, trained citizens making up Community Emergency Response Teams are able to fill the void and render limited assistance to their communities. The hands-on CERT training included topics on disaster preparedness, fire suppression, disaster medical operations, light search and rescue, disaster psychology and team organization, and is topped off by a disaster simulation.

If you would like to be better prepared to help your friends, family, neighbors, and others survive a major disaster, CERT training might be just the thing for you. Watch for an announcement from the Emergency Preparedness Office telling when the next class will be scheduled.

What will you do to help yourself and others after a disaster strikes?

“Creating Art Safely”

EH&S has a new DVD entitled “Creating Art Safely - a six step process.” Funded in part by United Educators and filmed at the Rhode Island School of Design, this DVD offers practical guidance to the artist. Please contact Kenya Sanders at 5700 to check out the DVD for showing in your studio or shop.

It's Time for the Lab Safety Seminar

The highly rated Laboratory Health and Safety Seminar is scheduled for Wednesday, September 2, 2009, from 1:15 p.m. until 4:15 p.m., in 123 Fogelman Executive Center. As always, we continue to improve the seminar and add material to liven things up.

In addition to providing you with information to help you work more safely in the lab and protect the environment, we promise refreshments and fun.

Your registering for the seminar through your department by August 28 will help ensure that we have plenty of refreshments and handouts. (Taking our handouts does not make you a panhandler.)

Does everyone in your lab, shop, or studio know how to properly manage their hazardous waste?



Frank Williams from EH&S makes a presentation on hazardous materials safety during CERT training. (Photo by Katherine Miller)

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UCLA Lab Fatality Update

Since our article in the January, 2009, edition of *Environmental Health and Safety*, there have been numerous reports published about the unfortunate death of 23 year old UCLA lab worker Sheharbano (Sheri) Sangji. *Chemical and Engineering News (C&EN)* published several of these reports, including one with the title “Negligence Caused UCLA Death.”

You will recall that Sheri was working with a small amount of pyrophoric tert-butyllithium on December 29, 2008. She was not wearing a lab coat when a fire ensued, causing her synthetic sweater and gloves to immediately ignite. The burns over 43% of her body led to her death 18 days later.

This tragedy should remind all of us that little things, like proper training and wearing personal protective equipment, can be life and death issues. That *C&EN* article noted above ended with the following statement: “...the incident that led to Sangji’s death could happen in any school and should serve as a wake-up call for faculty, university officials, funding agencies, and professional societies to put a new emphasis on lab safety.”

Learn about proper handling of organolithium compounds at http://membership.acs.org/c/chas/techarchive/organolithium_in_labs.pdf.

Don't Tread on Me

Whether you are replacing tires on your personal vehicle or a University vehicle, it is important to brush up on your physics before doing so. If only two tires need replacing, tire maker Michelin® reminds consumers to put the new tires on the rear to decrease the chance of going out of control on wet roads. See the video at <http://www.michelinman.com/tire-care/tire-basics/reartire-change/> to see the handling difference between new tires mounted on the rear of a vehicle versus those mounted on the front.

Reminder from President Raines

On June 26, 2009, President Shirley Raines sent an e-mail reminding us that “...it is important that faculty and staff contribute to our success by ensuring that we are good stewards of the environment and that we provide a safe and healthy place to learn and work. Complying with environmental, health, and safety regulations is critical to this process and it is the legal obligation of every employee.”

President Raines also stated, “If we fail to abide by applicable laws, regulations, policies, procedures, and internal guidance documents, we may create unacceptable risks for ourselves and for the University.”

If you need a copy of the complete message, contact EH&S. We will be happy to forward the information to you.

Are you ensuring compliance with health, safety, and environmental regulations in your lab, studio, work site, or shop?

Environmental Fines Increase

On January 12, 2009, federal civil penalties for violations of many environmental regulations increased to \$37,500 per violation per day. As you go about your work, please ask yourself whether your department can afford even one civil penalty like this. If you need guidance or training to help you operate in compliance with these regulations, call EH&S.

Radiation Safety Training is Required

In addition to getting all the proper permissions before acquiring or using an x-ray machine or radioactive source, don't forget that all personnel working with ionizing radiation must successfully complete radiation worker training. Please contact Al Simpson (asimpson@memphis.edu) to schedule this training.



University Officials Prepare for H1N1

On August 4, 2009, the University Crisis Management Team, including President Raines, Provost Faudree, and vice presidents, participated in an exercise to help prepare for University-wide response to a pandemic. The three hour exercise provided an opportunity for the entire crisis management team to interact as it might during any type of crisis.

University preparations to mitigate the current H1N1 (swine) influenza pandemic continue as members of the Crisis Management Team plan for offering injections of the new vaccine as soon as it is available from the federal government. You will be hearing more about H1N1 vaccination availability in the near future.

Get the latest information on H1N1 at <http://memphis.edu/swineflu.php>.

How Full is Too Full?

Do you fill your hazardous waste bottles to the top to make sure to get every drop in there? If you do, your good intentions can create a major problem when the temperature rises. Some wastes have relatively large coefficients of thermal expansion, leading to a significant rise in a container's internal pressure as temperature rises and the contents expand.

At a minimum an overfilled bottle can lead to a leak. Under worst case conditions, the container will violently break, causing hazardous chemicals and shards of broken glass to be hurled about the room. This worst case scenario can lead to death, injury, fire, or serious contamination of facilities.

So, only fill waste bottles to the shoulder. Leave some head space for expansion of the contents to help your waste stay safely in the bottle.

Never completely fill a hazardous waste container.

Army Research Lab Pays \$89,500 to Settle Environmental Violations

The U. S. Army Cold Regions Research and Engineering Laboratory in Hanover, New Jersey, agreed to pay \$89,500 for alleged violations of federal and state environmental laws. Among the items of non-compliance noted by Environmental Protection Agency inspectors were improperly labeled containers of hazardous waste and failure to provide secondary containment for hazardous waste stored in an area with a floor drain.

Are you using secondary containment to prevent spills?

Chemical Reactivity Management Guide

Thanks to the cooperation of several organizations and government agencies, including OSHA, EPA, and the American Chemistry Council, you can now access *Essential Practices for Managing Chemical Reactivity Hazards* on-line at no cost. You may register to view the entire book at <http://info.knovel.com/ccps>.



Example of a waste bottle with the absolute minimum head space to allow for expansion of the contents. (Photo by Katherine Miller.)

Chemical Hygiene Program Updated

While many of you were away for the summer, the Chemical Hygiene Committee continued working to promote lab safety. As part of this work, the *Laboratory Chemical Hygiene Program* was updated to add a section on nanomaterials safety. See the updated CHP at <http://ehs.memphis.edu/chp2005.pdf>.

Don't Trash That Stuff

Don't forget that you are responsible for determining if a material is a hazardous waste before you trash it. See "Recognizing Hazardous Waste" at <http://ehs.memphis.edu/recognizehazwaste.pdf>.

Rotary Evaporator Incident at U of Calgary

The University of Calgary reported an incident in which an explosion and fire occurred while using approximately 100 milliliters of carbon disulfide in a rotary evaporator. Water damage from the sprinkler system occurred across several floors of the building, and power was shut down, leaving freezers and incubators inoperative for several hours.

Lab Fires, Explosions at Other Institutions

University of Manitoba

The University of Manitoba suffered a March 28, 2009, fire that caused major damage to the Duff Roblin Building. Duff Roblin housed facilities for several departments, including Biology. Teaching and research was seriously impacted by the fire. An account of the damage and recovery process is posted at http://umanitoba.ca/fire_recovery_efforts.html.

Notre Dame University

An explosion in Notre Dame University's Fitzpatrick Hall of Engineering caused "moderately serious burns" to a student according to an April 24, 2009, post by *The Observer*. The student was apparently combining what were described as "non-toxic" chemicals before the explosion and fire.

Texas A&M University

A July 21, 2009, posting to *KWTX.com* reported that Texas A&M's Chemistry Building was evacuated due to a small fire involving sodium. Heavy smoke, electrical service interruption, and water damage were reported.

Wesleyan University

An article in the April 20, 2009, edition of *The Hartford Courant* noted a weekend three alarm fire that originated in a chemistry lab at Wesleyan University. The lab apparently received extensive damage, and other areas of the building received water and smoke damage.

Rensselaer Polytechnic Institute

The Associated Press reported that a student received burns to her hands and 15 firefighters were exposed to smoke and chemicals due to a June research lab fire at Rensselaer Polytechnic Institute. The fire apparently started while a student was working alone in a lab.

Thanks to everyone who helped make sure that we were not among the institutions listed above. Keep up the good work!



Busted! What is this person transferring from his glove to the vending machine? Remove your gloves before touching clean surfaces and before leaving the lab!

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