



# n o t e s

## ENVIRONMENTAL HEALTH AND SAFETY

### Laboratory Security

Ever since 9/11, security has been an issue at the top of the public's agenda. EHS has publicized this issue in our newsletter on several occasions and frequently through our laboratory monitoring programs. However, security continues to be a high profile issue. Unfortunately, there appears to be widespread concern that university laboratories are easy sources for terrorists to obtain targets of various types of hazardous materials.

Elsewhere in this newsletter, you will see that the NRC took a close look at security when it recently inspected MU for compliance with its license to use radioactive materials. The Department of Transportation recently came out with new security requirements for shipments of hazardous materials. However, biological hazards currently hold the top spot for laboratory security issues.

Lately, we have seen the release of a US Department of Agriculture report that found serious security shortcomings in university research laboratories. The National Research Council released a report that raises significant issues about the oversight and publicity of certain kinds of research involving biological materials. A world renowned professor at Texas Tech has been jailed and is on trial due to issues related to his handling of biological agents that cause the plague.

Whenever any of these national issues surface, MU gets inquiries from the media and others with the question of whether these things could

happen here. MU has examined security issues from many angles and has significantly upgraded security arrangements over the past two years.

Still, security is not a job that is ever completed. EHS requests all laboratory workers to be continually vigilant about possible security issues. Feel free to contact our office should you desire assistance in reviewing security issues in your laboratory.

**Peter Ashbrook**  
Director

### *In This Issue*

Laboratory Security	1
NRC Inspection	1
Director's Desk	2
Safer Laboratories	2
Candle Safety	3

### NRC Inspection

Four Nuclear Regulatory Commission (NRC) inspectors arrived at our doors on September 15, 2003. This team spent five days on campus taking a much more thorough look at the campus radiation safety program than in past years. They visited 80 research laboratories, four hospitals, the EHS storage and waste management facility, and reviewed paperwork related to all program areas. Many of you spoke with one or more of the inspectors.

At the exit meeting, the inspection team discussed several areas of concern. Along with the concerns, which they characterized as minor, the inspectors praised many of our accomplishments and the radiation safety program in general. It was clear to the (continued page 4)



## Director's Desk

### PAVE the Way to a Safer Mizzou

Earlier this year I wrote about pedestrian safety, but the issue is so important, I feel the need to write more. Improving pedestrian safety is one of those seemingly intractable problems, but that doesn't mean we are just going to throw up our hands and give up.

Last semester, thanks to financial support from the School of Journalism, three senior students in Advertising studied the issues around pedestrian safety at Mizzou and proposed a safety campaign they called, "PAVE the way to a safer Mizzou." PAVE stands for Pedestrian And Vehicle Education.

Implementation of this campaign began in September and will continue throughout the year, as well as the future. There are some engineering solutions that can improve safety, such as better marking of crosswalks, modifying traffic patterns, and constructing a new pedestrian bridge over College Avenue. MU Police have stepped up enforcement of the law protecting pedestrians in crosswalks. However, these and similar steps can only go so far. The Advertising students correctly determined that the biggest impact on pedestrian safety will occur if pedestrians and drivers alike are cautious at all times.

This fall, we have a record enrollment at Mizzou. One cannot be on campus for more than a few moments without observing potential hazards to pedestrians. Therefore, I again urge everyone to be cautious and help PAVE the way to a safer Mizzou.

**Peter Ashbrook**

*Help! We're updating the EHS Website and are looking for volunteers to give us feedback. If you are interested in helping, contact Rebecca Bergfield, 882-7018.*

## Safer Laboratories

I'm pleased to reintroduce a program designed to reduce the presence of one hazardous material at Mizzou, and introduce a new program to help Registered Users (RUs) provide safer storage of other hazardous materials.

**Mercury Reduction:** The revamped program being reintroduced is our "Elemental Mercury Reduction Program." Mercury represents a persistent toxic threat to our environment. In recent years, public awareness of this fact has increased dramatically – soon consumers may no longer be able to purchase mercury filled thermometers. Manufacturers long ago reduced mercury levels in alkaline batteries to non-toxic levels. Now we're asking RUs to do their part by pledging to reduce the use of elemental mercury in laboratories. In exchange for this pledge, EHS in conjunction with the campus' Hazardous Materials Management Committee (HMMC), will replace elemental mercury-containing devices with non-mercury equivalents (when possible) at no charge to the RU. Application forms and complete information regarding the program can be found on the EHS website at: [www.missouri.edu/~muehs/Mercury.htm](http://www.missouri.edu/~muehs/Mercury.htm)

**Safe Chemical Storage:** The HMMC should be thanked for an even more exciting new program that has been in the works for some time: "Safe Storage for Hazardous Materials." This multi-year, cost-sharing program will assist RUs in purchasing equipment to safely store flammable and corrosive materials, including flammable materials that require storage at reduced temperatures. The program is designed to focus on the specific needs of individual RUs – from intrinsically safe refrigerators and freezers to flammable and corrosive storage cabinets ranging in size from under-the-counter to full-height and double-depth. The program does not limit the RU to any particular size or brand – but instead recognizes that the needs on campus are as varied as the solutions available.

This program will provide matching funds to purchase needed equipment. Because funds are (continued page 3)

## Candle Safety

Candles are popular items, especially around the holidays. Unfortunately, candles also present a significant fire hazard both in the workplace and at home. According to the National Fire Protection Association (NFPA), the incidence of candle fires in homes almost tripled during the 1990's to over 15,000 in 1999. Home candle fires are more common in winter months, and almost twice as many home candle fires occur in December as in an average month. NFPA reports that 37% of these fires occurred because candles were left unattended, abandoned, or inadequately controlled and 19% occurred because some form of combustible material was left too close to the candle.

**At home**, do not underestimate the potential for a devastating fire caused by one small candle. The Columbia Fire Department suggests the following safety tips when using candles:

- Extinguish all candles when leaving the room or when going to sleep.
- Keep candles away from items that can catch fire such as clothing, books, paper, dried flowers, and curtains.
- Make sure candles are placed on a stable piece of furniture in sturdy holders that will not tip over.
- Do not allow children or teens to have candles in their bedrooms. Almost half (44%) of home candle fires start in the bedroom.
- When purchasing or designing arrangements for candles, consider what would happen if the candle burned too low. Could it burn the candle holder or decorative material nearby?
- Votive and container candles should be extinguished before the last ½ inch of wax starts to melt.

Always maintain fresh batteries in your smoke alarms and test them once a month. A functioning smoke alarm is your best defense against the dangers of fire. Install smoke alarms on at least on every floor of your home and outside sleeping rooms.

**At MU**, Environmental Health and Safety (EHS) discourages the use of candles in the workplace.

In fact, all use of candles and other activities involving open flames requires prior approval by EHS. This approval process assures the responsible person is identified, fire watch is present, fire hazard conditions have been eliminated through a site visit, and that appropriate site personnel are familiar with and trained to use portable fire extinguishers. For more information about open flame approvals, visit the following web site: [www.missouri.edu/~muehs/fireprotection.htm](http://www.missouri.edu/~muehs/fireprotection.htm)

Contact Environmental Health and Safety or the City of Columbia Fire Department for more information on candle safety and the installation and use of smoke alarms. Enjoy candles, but remember that the safe use of candles is the only way to use candles and still get a good night's sleep.

**Amy Barrett**  
Assistant Fire Marshal

## Safer Laboratories (Cont.)

limited for this program and demand is expected to be high, award deadlines will be set and requests will be prioritized. Factors in prioritization will include previously identified deficiencies and relative risk reduction/cost benefits. Due to existing contracts, products which can be ordered at a discount through Fisher Scientific are more likely to be approved than from other vendors. Application forms and complete information regarding this program can be found on the EHS website at: [www.missouri.edu/~muehs/safe-storage.htm](http://www.missouri.edu/~muehs/safe-storage.htm)

My staff and I are constantly looking for ways to increase safety and compliance and decrease costs and complexity of MU's hazardous materials programs. Your comments and suggestions are always welcome because they help everyone build a safer Mizzou.

**Todd Houts**  
Assistant Director, EHS

## NRC Inspection (Cont.)

inspectors that the Authorized Users and those who worked in radioactive laboratories took their regulatory responsibilities seriously and had an excellent rapport with EHS staff. We are particularly proud of the Radiation Safety Committee audit, which as one inspector indicated, was unique in her experience.

Several weeks after the inspection, the NRC issued one citation of the most minor nature. There was no fine and no additional response from MU was required—evidence that all parties involved in the MU radiation safety program took swift and thorough action to respond to the NRC's concerns.



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The major focus of the NRC inspection was security of radioactive materials. This was not a surprise as the Radiation Safety Committee, the University administration, EHS, and the University community have all given great attention to radioactive material security and control during the past two years. However, control and security of very small quantities of radioactive materials had previously received less attention. The inspectors explained that the NRC currently enforces failures to secure or ~~m aintain surveillance over~~ **ANY** quantity of licensed material. While it may seem that EHS sometimes worries about the security of trivial amounts of radioactive materials, our experience with these inspectors demonstrated that our concerns were well placed.

Another area of concern raised by the NRC inspectors was food and drink. In one case, a cookie wrapper was found in a trash can in a restricted area. Though we had reliable evidence that the cookie had been consumed outside the restricted area, the NRC examined this incident very closely. As a result, we continue to require that there be no evidence of the consumption of food and drink in restricted areas—please be careful how wrappers and other evidence are disposed.

The Radiation Safety Committee has established an ad hoc subcommittee to review all information arising out of this NRC inspection. It is possible that the Committee may amend some procedures to better prevent some of NRC's areas of concern in the future.

I want to thank the research community for its active support of the radiation safety program and adherence to program requirements. We had been concerned that our recent record of clean NRC inspections would lead to complacency. This inspection demonstrated that our research community continues to do an outstanding job of using radioactive materials safely.

**Lidia Litinski, Ph.D.**  
Radiation Safety Officer

*EHS appreciates campus support of environmental and safety issues. If you have any special needs regarding the format of this publication, or have any comments regarding newsletters, training programs or services, please direct your communications to Rebecca Bergfield, Editor at the above address.*

