



# notes

## ENVIRONMENTAL HEALTH and SAFETY

### Seasonal Influenza (Flu) & Colds Prevention

The flu and cold season is upon us. On campus, there are several higher risk areas that can facilitate germ transmission. To name a few, there are dormitories, fraternity and sorority houses, dining facilities, high occupancy classrooms, offices, laboratories, and social or athletic events. This is the time to observe good personal hygiene habits/practices.

#### How Germs Spread

Illnesses like the flu (influenza) and colds are caused by viruses that infect the nose, throat, and lungs. The flu and colds usually spread from person to person when an infected person coughs or sneezes.

#### How to Help Stop the Spread of Germs

Take care to:

- Cover your mouth and nose when you sneeze or cough
- Clean your hands often
- Avoid touching your eyes, nose or mouth
- Stay home when you are sick and check with a health care provider when needed
- Practice other good health habits

#### Cover Your Mouth and Nose When You Sneezes or Cough

Cough or sneeze into a tissue and then throw it away. Cough or sneeze into your upper sleeve, not your hands, if you do not have a tissue. Then, clean your hands, and do so every time you cough or sneeze.

#### Clean your Hands Often

When available, wash your hands -- with soap and warm water -- then rub your hands vigorously together and scrub all surfaces. Wash for 15 to 20 seconds. It is the soap combined with the scrubbing action that helps dislodge and remove germs.

When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used. You can find them in most supermarkets and drugstores. If using a gel, rub the gel in your hands until they are dry. The gel doesn't need water to work; the alcohol in the gel kills germs that cause colds and the flu.

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**EHS***Director's Desk***New EHS Director**

The University of Missouri is very happy to introduce Maureen Kotlas as the new director of EHS. Maureen started at MU this fall, but has been involved with the field of environmental health and safety most of her career. Previously, Maureen was the director of the Environmental Health and Safety departments at Harvard University and at the University of Maryland. As the director of EHS at Stony Brook University in Stony Brook, New York, Maureen responded to the World Trade Center as part of the University's Technical Rescue Team and provided respirator training and fit testing to emergency responders.

Maureen is a Certified Safety Professional (CSP) and a Certified Professional Environmental Auditor, Health and Safety (CPEA). She is a professional member of the American Society of Safety Engineers (ASSE) and a member of the Campus Safety, Health and Environmental Management Association (CSHEMA), where she is the immediate past president.

Maureen's commitment to the field of environmental health and safety has been recognized by the ASSE. In September of this year it was announced that Maureen is being honored as one of 100 Women Making a Difference in Safety. This program "honors women from around the world and throughout history for their dedication to protecting people, property,

and the environment and for going above and beyond to make a difference."

We congratulate Maureen for this honor and look forward to her bringing new experience, insight, and leadership to EHS and to MU.

**Greetings From the New Director**

Greetings,

I am very pleased to have joined the MU Department of Environmental Health and Safety (EHS) in August. I have been busy getting to know the very talented individuals who make up our department as well as the broader campus community. I am particularly impressed with the beauty of the campus, the impressive stature of the university in the education, research and healthcare communities, and the great Tiger fan spirit. This is truly a great university and I look forward to working with our very skilled EHS team in developing and strengthening partnerships throughout the university.

Please let us know how we can help. I welcome your ideas and feedback and look forward to meeting and working with you.

Sincerely,

***Maureen Kotlas***

## **Seasonal Influenza (Flu) & Colds Prevention (Continued)**

### **Avoid Touching Your Eyes, Nose, or Mouth**

Germs are often spread when a person touches something that is contaminated with germs and then touches their eyes, nose, or mouth. Germs can live for a long time (some can live for 2 hours or more) on surfaces like doorknob, desk, table, cell phone, keyboard, mouse, telephone & chair paperwork, pens/pencils, etc.

### **Stay Home When You are Sick and Check with a Health Care Provider when Needed**

When you are sick or have flu symptoms, stay home, get plenty of rest, and check with a health care provider as needed. Remember: Keeping your distance from others may protect them from getting sick. Common symptoms of the flu include:

- fever (usually high)
- headache
- extreme tiredness
- cough
- sore throat
- runny or stuffy nose
- muscle aches
- nausea, vomiting, and diarrhea, (much more common among children than adults)

### **Practice Other Good Health Habits**

Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food. Practicing healthy habits will help you stay healthy during flu season and all year long.

### **More Facts, Figures, and How-To Ideas**

CDC and its partner agencies and organizations

offer a great deal of information about handwashing and other things you can do to stay healthy and avoid the germs that cause flu, the common cold, and other illnesses. Other resources of information are also available at: <http://www.cdc.gov/flu/protect/stopgerms.htm>

**Roger Riddlemoser**  
*Assistant Director, EHS*

## **Emergency Guidance for Faculty and Staff**

The University of Missouri is committed to protecting the welfare of its community members and safeguarding the property and vital interests of the university. Faculty and staff members play an important role in the implementation of all MU emergency plans. In order to help MU employees better understand what to do in the event of some emergency situations Environmental Health and Safety has created an on-line class as a resource. The topics covered in this class include: Building Emergency Action Plans, Emergency Notification, Fire Safety, Medical Emergencies, Tornado Safety, Building Evacuations, Earthquake Safety, and Biological, Chemical, or Radiation Emergencies. The course also gives resources available on campus and locally for help with these and other emergencies.

This on-line course takes approximately 15 – 20 minutes to complete and is interactive. It can be found at the following link.

<http://ehs.missouri.edu/train/emergency-guidance/genemer-opening.html>

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## Emergency Guidance for Faculty and Staff (Continued)

There is no requirement to take this class. However, MU Faculty and Staff are encouraged to take the course and review it annually to keep the material fresh in their minds and be aware of any updates that may have occurred since they last took the course.

If you have any questions or comments on the new MU Emergency Guidance for Faculty and Staff course, please feel free to contact me at 882-3986, or [BergfieldR@missouri.edu](mailto:BergfieldR@missouri.edu).

**Rebecca Bergfield**  
*Training and Development Coordinator*

## New User-Friendly Bloodborne Pathogens (BBP) On-line Training Resource

Your EHS team is continuing to improve the learning and training resources available for the faculty, staff and students on campus. One of the latest additions to these EHS resources is the new user-friendly Bloodborne Pathogens (BBP) On-line Training. This class will enable all of us to be better informed about the risks and hazards associated with human BBP and other potentially infectious materials.

This class is intended for laboratory personnel and investigators working routinely on BBP such as human or non-human primate: blood, tissues, or blood products (including human cell lines). The training covers blood borne pathogens (BBP), transmission, exposure potential, incidents, universal precautions, Hepatitis B vaccine, emergency release clean-up, policy and available resources. All BBP workers in biohazard laboratories or use areas must take

this training yearly.

This new EHS resource is available at: <http://ehs.missouri.edu/bio/training/bbpor/bbpor.html>

**Roger Riddlemoser**  
*Assistant Director EHS*

## NRC Inspection of Pickard Hall

On August 25 and 26th of this year the University of Missouri was inspected by the U.S. Nuclear Regulatory Commission (NRC) Decommissioning Branch. The purpose of the inspection was for the (NRC) to conduct independent radiological surveys of Pickard Hall. This is the second inspection of Pickard Hall with regards to decommissioning.

Pickard Hall was the first home of the Chemistry department and because of pioneering work with radioactive materials that occurred at the turn of the century, the building contains some areas of residual contamination. This research was conducted by Herman Schlundt with naturally occurring radioactive materials to isolate radium-226.

The previous inspection was excellent with the NRC stating they concurred the building was safe. However, during this inspection a level IV Notice of Violation was warranted for not posting "Caution Radioactive Materials" signs in a few areas of the building. A level IV violation is the lowest possible score of a violation and is issued for minor administrative deficiencies.

**Jack Crawford**  
*Assistant Director EHS*

## Safe Management of Oxidizing Acids

The Hazardous Material Services group of EHS encounters an extremely diverse array of chemicals in their daily activities (including exotic and novel research compounds), so it might surprise some members of the campus community to learn that amongst this diversity, some relatively common materials have repeatedly been the cause for problems in the past. These materials are oxidizing acids, and for a variety of reasons, special care must be taken in the storage, use, and disposal of them.

Oxidizing acids are the class of compounds which display both acidic and oxidizing tendencies. Common examples include Nitric Acid, Aqua Regia (Nitric and Hydrochloric Acids), Perchloric Acid, and Piranha Solution (Sulfuric Acid with Hydrogen Peroxide). In practical terms, these are chemicals which when mixed with organic or otherwise combustible materials have the potential to generate gasses, cause ignition of these materials, and accelerate their combustion.

These materials are used in a wide variety of settings across campus. Examples of their use include water treatment, descaling, digestion of organic material, glassware cleaning, and laboratory reagents. These materials serve too many functions to make elimination of their use a practical option.

Because it is impractical to eliminate the use of oxidizing acids, it is important that members of the campus community learn to recognize their potential hazards and apply this knowledge so that these materials are managed safely. Effective Personal Protective Equipment should always be employed while handling these materials, including eye protection, chemical

resistant gloves, and aprons or lab coats. Oxidizing acids should be placed in secondary containment and segregated from contact with all other chemicals. Even though these materials share similar properties with other common mineral acids, they have the potential to generate toxic gasses when combined. Never under any circumstance should these materials be stored with bases. When these incompatible classes of materials are mixed, they have the potential to generate excess amounts of heat, which compounded with the ability of oxidizing acids to accelerate combustion of flammable materials can produce a significant fire hazard. When it is necessary to use these compounds to digest organic materials, it is important to allow adequate ventilation during this process to prevent a violent rupture of the vessel being used for this purpose. Finally, even seemingly spent oxidizing acids may continue to generate gas and develop pressure. These materials should be collected for disposal in plastic coated bottles, and pressure venting caps (available when appropriate from the MU-EHS Chemical Redistribution Program) may be needed to ensure that gasses can escape from the vessel but liquids cannot.

Oxidizing acids are an extremely useful class of chemicals. However, like nearly every chemical, they have the potential to cause great harm when used carelessly. In order to use these materials safely, it is important that their hazards be identified and addressed. When in doubt, pursue further guidance from sources such as Material Safety Data Sheets, lab managers, or EHS. By seeking this information before work begins, we can ensure a safe work environment in all of the settings in which these materials are used.

**Kevin Fasken**  
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## New MU Biological Safety Professional Aboard

Chris Jenkins, Biological Safety Professional, joined the EHS team in August, 2011. He adds additional person-power to address the growing Life Sciences needs of the MU campus. This Biological Safety Program includes blood borne pathogens, recombinant and synthetic DNA constructs, biohazardous material, Select Agents and Toxins, food safety and pool safety.

Chris has a Bachelor of Science in Biology from MU and a Master of Public Health in Biosecurity and Disaster Preparedness from Saint Louis University. He is a Registered Biological Safety Professional (RBP) and Hazardous Materials Manager In-Training (HMMT). He is currently finishing a PhD in Biosecurity from Saint Louis University with an anticipated graduation in May, 2012. He is studying for his Certified Hazardous Material Materials Manager, Certified Biological Safety Professional, Certified Safety Professional and Specialist Microbiologist certifications. His

interests are in infectious disease research and high-containment BSL-3/ABSL-3 work.

Chris and the biosafety team strive to establish clear EHS direction, communication and credible resources to protect all MU Faculty, Staff, Students and Visitors. He is looking forward to starting his family with wife Jenna in Columbia starting November, 2011. Chris stays active with a variety of sports, hiking and camping as well as visiting family in the surrounding Missouri area.

**Roger Riddlemoser**  
Assistant Director EHS

*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.*