



A Quarterly Newsletter by The Environmental Health and Safety Office

**NEWSLETTER SPOTLIGHT**

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- **Asbestos Program**
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● **Safety Awareness Months**

October 2010:

Eye Injury Prevention Month (October 1 -31): [www.geteyesmart.org/eyesmart/injuries/index.cfm](http://www.geteyesmart.org/eyesmart/injuries/index.cfm)

National Fire Prevention Week (October 3 –9): [www.nfpa.org](http://www.nfpa.org)

November 2010

Tie One On For Safety - Become involved in the fight against drunk driving: <http://maddpa.org/edu/redribbon.html>

December 2010

Safety Toys & Gifts Month: <http://www.safekids.org/>

**SPOTLIGHT: Assistant Director of Chemical Safety and Environmental Compliance**

Heather Jackson, EHSO’s new assistant director for Chemical Safety and Environmental Compliance, is a Chicago native and graduate from the University of Chicago (Phi Beta Kappa). She completed her Master’s degree in Environmental Science and Engineering at Virginia Tech. As a Certified Hazardous Materials Manager with over ten years of environmental and safety experience, she brings a new level of expertise to UIC having held various positions in government, industry, and consulting.

Heather describes her new position as,

**"... truly my dream job. The environmental, health, and safety issues of a university like UIC rival a small city and are very diverse and challenging."**

Heather started as Assistant Director in September of 2009, immediately working with her staff to focus on making the lab safety program more data-driven and targeted toward the most pressing issues. A new prerogative she created was a list of chemicals called the "UIC Chemicals of Concern." These chemicals in laboratories pose a high risk because they are extremely hazardous and they

are regulated by a federal agency such as the Occupational Health & Safety Administration (OSHA).

The Chemical Safety group is also focused on more effective chemical management in non-laboratory areas such as building storage facilities. In addition, a new hazard communication-awareness (HazCom) program has been developed for non-laboratory spaces.

Heather is currently working with Building Services to review all the chemicals they work with in order to determine proper personal protection equipment (PPE) management and appropriate Material Safety Data Sheet (MSDS) maintenance. Another new initiative is the Asbestos Awareness Program. The primary objective of the Asbestos Program is to minimize the exposure of building occupants to airborne asbestos fibers.

Heather has also started an initiative to improve UIC’s Hazardous Waste removal program. The program will include a hazardous waste tracking system (chain-of-custody) and an electronic based campus outreach effort. The focus will be to increase customer service by better tracking and status reporting of hazardous chemical waste removal efforts.

Heather has many more initiatives planned to improve UIC's Chemical Safety Program. As she states quite often,

***"We must never be complacent regarding employee safety and environmental stewardship."***

Heather can be reached at (312) 413-9706 or via e-mail at [heather9@uic.edu](mailto:heather9@uic.edu).

## UIC's New Asbestos Program

The Environmental Health and Safety Office (EHSO) has developed a new asbestos safety program to effectively protect UIC employees from asbestos exposure. EHSO's new asbestos safety program is led by Jerome Sides; the UIC Asbestos Coordinator.

Asbestos, the name of a group of minerals that consist of long thin silicate fibers, may be released into the air when asbestos-containing materials are damaged or disturbed. If improperly managed, asbestos can cause lung cancer, asbestosis, and mesothelioma.

The material was widely used commercially until the 1970's when health concerns led to some uses being banned and some voluntary phase outs (Seidman and Selikoff, 1990). Until the 1970s, asbestos was widely used in boilers and heating vessels, heat-protective pads, laboratory furniture, paper products, pipe covering, roofing products, sealants, coatings, and insulation products. These materials remain in many buildings built before 1975.

The new asbestos program takes a multi-pronged approach to prevent employee exposure to harmful asbestos fibers:

1. EHSO has assembled a comprehensive inventory of all asbestos and presumed asbestos-containing materials on campus.
2. A Work Order/Project Review System was

developed to assess all proposed work prior to start that may have a potential to disturb asbestos-containing building materials.

3. Warning signs will also be posted in all areas known to house asbestos-containing material. These elements will allow UIC employees to know and be forewarned where asbestos is in their workplace so special care can be taken not to damage the material and potentially release fibers.

To implement these new procedures, Jerome will be conducting asbestos training for the Office of Capital Projects and the Small Projects group in addition to revamping the training for the maintenance, building service workers, housekeeping, and the trades. Training includes information on the health effects of asbestos exposure, the location of asbestos-containing materials at UIC, and work practices to avoid exposure. The training consists of hands-on and classroom instruction.

If you have any questions about asbestos, please call Jerome Sides at 312 996-7411 or email [jvsides@uic.edu](mailto:jvsides@uic.edu).

## **Indoor Air Quality**

By Paul Umbeck  
Contributing Writer

### **Background**

Indoor air quality is a major concern for workplace environments because it can impact the health, comfort, and well being of building occupants. Poor indoor air quality can result in the loss of productivity, decreased performance and increased absences. It can aggravate or hasten the development of respiratory issues such as asthma. Short term exposure to poor air quality can often lead to eye, nose and throat irritation, headaches, dizziness or worsening of asthma symptoms. Indoor air quality problems can be very complicated due to the complexity of buildings, ventilation systems, type of activities conducted, equipment, seasonal changes and personal preferences relative to temperature.

Being aware of the air we breathe is the first step to achieving a healthy work environment. The nature and quantity of hazardous chemicals, biologicals or particulates in the air will determine the health risk of the environment. Unfortunately, not all pollutants have an odor (have you ever smelled radioactive material or carbon monoxide?) and the presence of an odor does not necessarily indicate risk from inhalation of poor air quality.

Acceptable indoor air quality is air in which there are no known contaminants at harmful levels. Unfortunately, there are no established enforceable criteria for indoor air quality because sensitivity can vary greatly among individuals. Most health related studies have been conducted on single chemicals or biological materials. So for many substances there are standards for short-term (acute) exposures called permissible exposure limits (PELs) which are commonly expressed as an eight-hour time-weighted average (TWA). However, less is known about long-term effects of exposure and the combined effects of combinations of chemicals and other airborne hazards.

### **Regulatory Framework and Guidelines**

As indicated above there are no specific enforceable regulations regarding indoor air quality. However, there are several agencies that closely monitor environmental pollutants and they have begun to develop guidelines for offices and buildings. A few of the important agencies include the Illinois Department of Public Health (IDPH), the Illinois Department of Labor (IDOL), the United States Environmental Pollution Agency (EPA), the Occupational Health and Safety Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The only air quality standards under which the U.S. operates come under the EPA's Clean Air Act and the National Ambient Air Quality Standards (NAAQS). The Clean Air Act is comprised of several pieces of legislation established to reduce the incidence of smog and air pollution. The most recent amendments include provisions for addressing acid rain and ozone depletion. However, there is no federal agency the currently regulates indoor air quality.

### **Concerns**

When considering indoor air quality, there are a few concerns that quickly come to mind. They include smoke, hazardous chemicals, volatile organic compounds (VOCs) and biological pollutants such as mold. One of the most common complaints at UIC involves VOCs. Because VOCs easily evaporate at room temperature they have become an increasing concern for impacting office air quality. VOCs may come from carpets, adhesives, paints, and fabrics or they may come from personal care products such as air fresheners, cleaning and disinfecting solutions, and cosmetics. In addition, there are many other concerns that may arise such as humidity, temperature, carbon dioxide, carbon monoxide, hydrogen sulfide (the smell of rotten eggs from sewer gases such as a dry drain or a broken pipe), ozone, particulates, formaldehyde, tobacco smoke, cleaning agents, fragrances, and aerosols.

When dealing with air quality emergencies, the first question is to determine if the problem is an immediate health hazard. OSHA defines Immediately Dangerous to Life or Health (IDLH) as **an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.** At UIC, the safety department's attention is most often drawn to incidents involving spills of hazardous chemicals, sewage leaks, gas leaks or biologicals.

Individual sensitivity to air quality can be influenced by many factors such as age, sex, genetic factors, personal habits (smoking, alcohol consumption), medication, previous exposures, hypersensitivity, and asthma. So what may appear to be just a nuisance to one individual may be a serious health concern for a sensitive person. All odor complaints must be initially treated as serious threats until it can be determined that there is no health or safety concern for workers. Investigations often times are inconclusive and frustrating because of the inability to identify a specific cause. This does not mean there is not a problem but that the transient nature of an odor or the identification of the source can be elusive and very difficult to determine.

### Recommendations

Office occupants and managers have a shared responsibility to ensure that indoor air quality is safe. In order to understand the challenges faced by indoor air quality, the U.S. EPA has published a guidance document to assist office managers with identifying potential sources of air pollutants and recommendations on how to promote good indoor air quality. The document is entitled *An Office Building Occupant's Guide to Indoor Air Quality* and can be found at [www.epa.gov/iaq/pubs/occupgd.html](http://www.epa.gov/iaq/pubs/occupgd.html).

The Environmental Health and Safety Office makes the following recommendations:

- Avoid the use of items that generate indoor odors such as air fresheners.
- Use cleaning chemicals and disinfectants only in ventilated areas. Do not mix cleaning chemicals with each other. Ensure that the manufacturer's instructions are followed.

- Keep carpets and furniture fabrics clean and dry. This will help to avoid the development of biological contaminants such as mold.
- Ensure that all food items are properly sealed and stored in appropriate (food only) locations. All stored food items should be dated so that old items can be identified and properly disposed.
- In areas where there are sinks, drinking fountains, and floor drains, once a month add sufficient water to fill drain traps. This will prevent the escape of sewer gases back into the office or laboratory environment.

If you have questions, contact the Environmental Health and Safety Office.

### Links to More Information about Indoor Air Quality

- Illinois Department of Public Health – <http://www.idph.state.il.us/>
- National Institute for Occupational Safety and Health (NIOSH) – <http://www.cdc.gov/NIOSH/>
- Illinois Department of Labor – <http://www.state.il.us/agency/idol/>
- U.S. Occupational Safety and Health Administration – <http://www.osha.gov/>
- U.S. Environmental Pollution Agency - <http://www.epa.gov/>

## Lessons to be Learned



*Type of Incident:* Needle stick to the forearm

*What Happened:* An Environmental Service Worker removed the trash bag from a laboratory when a needle inside the bag stuck the worker in the forearm.

*Immediate Cause:* A researcher disposed of a needle containing an epoxy glue resin into the regular trash instead of an approved sharps container.

*Root Causes:* Knowledge of proper waste disposal

All sharps, needles and glass pipettes must be disposed of into an approved leak-proof, rigid plastic container, clearly marked with the biohazard symbol on the outside of the container.



*Corrective Actions:* A sharps container was purchased; the immediate occupants of the laboratory were retrained on proper waste disposal inside a laboratory.

The Environmental Service Worker was notified of the material inside the needle to mitigate concerns of contracting any health-related disease.

## Environmental Health and Safety Office Trainings

The Environmental Health and Safety Office offers various online and instructor-led trainings. Please see our website for a full list: <http://www.uic.edu/depts/envh/>. Access is through the *Training* link in the *Table of Contents*. Below is a short list of trainings:

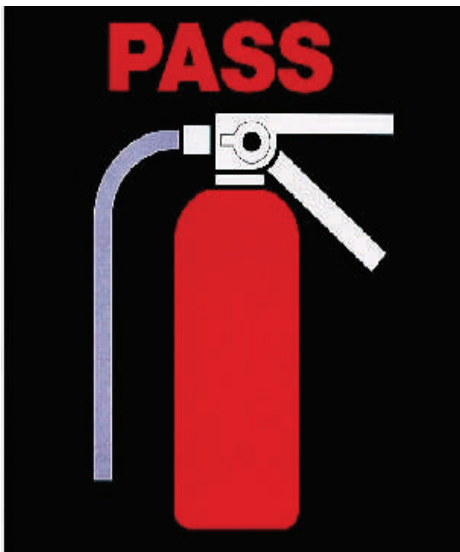
- **Asbestos Awareness Training** (online) - contact Jerome Sides at [jvsides@uic.edu](mailto:jvsides@uic.edu).
- **Basic Laser Training** (online) - contact Scott Dubick at [sdubic1@uic.edu](mailto:sdubic1@uic.edu).
- **Biological Safety Cabinets** (online) - contact Paul Umbeck at [umbeck@uic.edu](mailto:umbeck@uic.edu).
- **Biosafety Training:** For information on Biological Safety Level 3 training contact Paul Umbeck, Assistant Director for Biological Safety at (312) 996-6873 or email [umbeck@uic.edu](mailto:umbeck@uic.edu).
- **Bloodborne Pathogen Trainings:**
  - **Bloodborne Pathogen and Needlestick Prevention** (online)
  - **Bloodborne Pathogen Training:** Monthly training sessions are held at the College of Medicine Research Building, Conference Room 4175. The schedule is posted on our website. (Please note that November's training has been moved to room 3175).
- **Chemical Hygiene Officer and Laboratory Safety Training:** To take place on October 27 and 28 in School of Public Health and Psychiatric Institute (SPHPI) in the first floor auditorium from 9:00 a.m. until 1:00 p.m. In order to prepare for the "*Laboratory Safety and Chemical Waste Management*" training the online modules should be completed. The sign-up sheet is posted on the EHSO website or just show up. Contact Kevin Cisner at [kcisne1@uic.edu](mailto:kcisne1@uic.edu).
- **Fire Extinguisher Safety and Awareness:** To receive information on trainings, contact David Wilson, Fire Safety Specialist, at (312) 413-3706 or at [dhw@uic.edu](mailto:dhw@uic.edu). For basic fire safety information such as UIC Fire Alarm procedure, RACE, PASS, Fire Extinguisher classifications see the EHSO website and click on the *Fire* tab in the *Table of Contents*.
- **Food Safety Training:** For information contact the Environmental Health & Safety Office at (312) 996-7429 or Paul Umbeck at (312) 996-6873 or email [umbeck@uic.edu](mailto:umbeck@uic.edu).
- **Radiation Safety Training:** Session is three hours long with a written competency test given at the end. It is offered every two months in the Clinical Sciences North building, Radiation Safety Conference room 339. The next session is scheduled for November 10, 2010 and November 11, 2010. See the EHSO website for schedule and registration. Contact Allan Jackimek at [al-lanj@uic.edu](mailto:al-lanj@uic.edu).
- **Annual Refresher Training for Personnel Working with Radioactive Material.** Required by the IEMA. (online)
- **Respiratory Protection Training** (online) - Contact Dennis Terpin at [dterpin@uic.edu](mailto:dterpin@uic.edu).
- **Shipping and Receiving of Hazardous Materials (DOT/IATA) Training**—Contact Tom Johnson at [tjohns16@uic.edu](mailto:tjohns16@uic.edu).

According to the US Fire Administration (USFA), each year more than 4,000 Americans die and approximately 20,000 are injured in fires, many of which could be prevented. Although prevention is the key, it is just as important to understand what you should do if you ever encounter a fire. Here at UIC we follow and promote the RACE and PASS procedures when there is a fire.

### **RACE**

#### **If you discover or suspect a fire:**

- **R**escue anyone in immediate danger of the fire.
- **A**ctivate the nearest fire alarm pull station (in buildings not equipped with interior fire alarm, give vocal warnings to occupants) and call 5-5555 on campus phone (312-355-5555 on outside phone).
- **C**onfine the fire by closing doors to the fire (do not lock).
- **E**vacuate to an area of refuge.



### **PASS**

#### **Here's how you work a portable fire extinguisher:**

- **P**ull the pin, release the lock latch, or press the puncture lever.
- **A**im the extinguisher nozzle, horn, or hose at the base of the fire.
- **S**queeze or press the handle.
- **S**weep from side to side in most cases, but extinguisher types vary. Read the directions.

Questions/situations regarding fire safety should be brought to the attention of the Environmental Health and Safety Office, ext. 3-3706 or contact Dave Wilson at [dhw@uic.edu](mailto:dhw@uic.edu).