

### Personal Air Cleaners

Mark Banister

When the cold weather comes, we shut our windows and doors at home and spend much of our time indoors. This often results in a higher incidence of air quality related issues. Popular solutions for these issues (and possibly recent holiday gifts) are personal air cleaners, designed to improve our indoor air quality and alleviate our symptoms. Choosing the right air cleaner is sometimes difficult, so I hope to supply you with some resources for this task.

Consider first of all, the nature of the problem. If the concern is of mold, dust, pollen or other irritants that are essentially particulates, you will want to find something directed to those materials. A filtration unit with HEPA filters is your best bet. Units relying on electrostatic charges often emit ozone, an irritant gas, into the air.

If your concern is with say, solvent odors, you will need something with an adsorbent phase, generally charcoal. Any filtration type device will have no effect on a gas or vapor problem, just as any charcoal based unit would have no effect on solving particulate issues.

Sometimes the problem is not enough fresh air coming into your home, or possible low humidity. Air cleaners will do nothing for those problems—they should be addressed through your heating and cooling system. Especially when the weather outside is very cold and sunny, relative humidity in the home can go extremely low.

When considering a particular air cleaner, it is helpful to go on-line and check out its performance ratings. Often you will also see information about the noise level of the unit, what sort of maintenance is involved in running the unit (and how much new parts or filters cost), and how big of an area the unit will service. Cheaper units may require much more frequent replacement of filters and sorbent beds. And of course initial cost may be a factor in your decision.

Good luck and have a healthy New Year!

### MRSA

Jim Gindlesperger

Because MRSA (Methicillin-Resistant Staphylococcus Aureus, pronounced MER-

SA), is a hot topic on the news, it is important to educate ourselves about it.

MRSA is a skin infection that usually appears as a pustule or boil. It may be red, swollen, and painful, and it is often accompanied by drainage. It usually appears around cuts and abrasions, or areas of the body covered by hair. Those who have compromised immune systems may also develop pneumonia, bloodstream infections, or bone infections, although these symptoms are rare in healthy individuals. Treatment usually consists of drainage of the pus, and antibiotics may or may not be required.

MRSA usually is transmitted by skin-to-skin contact or contact with shared items, such as towels. The best protection is good hygiene. Wash your hands frequently with soap and water or use an alcohol-based hand sanitizer, and don't share towels or clothing. You should also cover any skin trauma, including minor cuts or abrasions.

Unless directed by a physician, it is not necessary for infected individuals to stay home from work. The exception is someone who has a draining wound that can not be covered with a clean, dry bandage. Anyone with an active infection should avoid activities where there is a possibility of skin-to-skin contact until the infection is healed. Personal items such as towels, washcloths, or clothing should not be shared.

Some have asked if the university should be closed because of the prevalence of MRSA. This is an extreme reaction that is generally not recommended by the Centers for Disease Control and Prevention. Simple preventive measures such as those outlined above are usually sufficient to keep the infection under control.

There is no reason to be overly concerned if you use common sense and follow good hygiene practices as outlined above.

### Mandatory Reporting Of Chemicals of Interest to Homeland Security

Madelyn Miller

Perhaps you have heard through your professional organizations or by word of mouth about a new law passed by the Department of Homeland Security (DHS), regulating chemicals that could be used by terrorists. DHS refers to these chemicals as

"Chemicals of Interest" (COI) and they are requiring all facilities, including colleges and universities, who possess these chemicals, to report them by January 20, 2008. This requirement is part of the Chemical Facility Anti-Terrorism Standards (CFATS), part of the Department of Homeland Security Appropriations Act of 2007, passed by Congress and signed by the President. Facilities who possess these chemicals in excess of the trigger amount may be required to implement additional security measures.

Identifying and quantifying chemicals on campuses will be difficult and time consuming for those who do not have a chemical inventory system. However, because ChemTracker is widely used throughout the university, time to review inventories for the faculty and Environmental Health and Safety's (EHS) time to compile the list will be much less.

EHS has reviewed the DHS list of COI and their associated trigger amounts and we have run a report through ChemTracker. We have 6 chemicals on the list of 163 and none come close to the amounts that would require us to report to DHS. We feel the information in ChemTracker is a reasonable representation of our chemical inventory. All laboratories are actively using it and it reflects an accurate snapshot of the chemicals we have on our campus. Because we have the program, and our laboratories are using it, we do not think we have anything to report.

### OSHA Imposter Arrested

Jim Gindlesperger

We have received word that an individual posing as an OSHA inspector recently was arrested at a Vermont construction site. This individual had what appeared to be OSHA credentials and workers reported that he seemed well versed on OSHA law. He was found out when someone recognized him as having been arrested previously for posing as a Navy recruiter.

While this is an unusual case, it shows that we tend to believe people who claim to be in positions of authority. Should someone come to your location claiming to be any kind of government official, contact EH&S immediately. We will determine the validity of their credentials and assist you in any inspections or investigations.

## Lifeline Your Safety Resource

A publication of the Environmental Health & Safety Department

### AED's on Campus

Ahren Cotten



"An Automated External Defibrillator, or AED, is a portable electronic device that automatically diagnoses potentially life threatening cardiac arrhythmias of ventricular fibrillation and ventricular tachycardia in a patient, and is able to treat them by application of electrical therapy which stops the arrhythmia, allowing the heart to re-establish an effective rhythm."

In conjunction with Pittsburgh United for Live Saving Emergencies, or PULSE, Carnegie Mellon has installed 30 AED units around campus. These units are in areas that are relatively accessible to the general campus population, and buildings housing AEDs are identified by decals, similar to the photo above, on building entrances.

When placed into service, the person using the AED is given detailed instructions via a pre-recorded step-by-step tutorial, making the unit extremely user friendly even to those who have never used one before. However, training classes are also offered. For those who would like to learn immediately how to use an AED, EH&S has a limited number of training CDs that can be borrowed. Contact us for details.

Any group that wants to purchase an AED for their area can do so at a reduced cost, and EH&S can furnish the necessary information on how to go about it. To view a list of AED locations on campus, go to <http://ehs-alert.fms.bap.cmu.edu/EHSWebSite/EmergencyOperations/AEDLocations.php>.

### Lab Ventilation

Jeffrey Harris



Unlike a typical office or classroom, laboratory ventilation requires special considerations before installing.

The first consideration is for the building codes; whether international or local, there are, at the very least, Fire Safety

considerations that apply. For example: laboratory fume hoods, local exhaust canopies and other specialized exhaust systems may not tie together multiple floors without engineered safety controls (such as fire dampers, emergency power and low flow alarms). In addition, fume hoods and other ventilating equipment must meet certain performance standards set by both the American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE), and the American National Standards Institute (ANSI). A key consideration is that a room is balanced between supplied and exhausted air. It's not just a calculation to determine if a fume hood motor and fan will exhaust enough air, but also whether there will be enough return air to maintain proper pressure within the room. Other considerations are set forth by the Environmental Protection Agency (EPA) Clean Air Act, the Occupational Safety & Health Administration (OSHA) Chemical Hygiene Plan, the National Institutes of Health (NIH) RDNA Research and the Nuclear Regulatory Agency (NRC). For example: certain chemicals, radioactive and even biological materials may not be exhausted without a permit. Filters may sometimes only be exhausted in set volumes. These considerations are critical for the safety and health of both people and the environment. Carnegie Mellon University offers support in this area and you can find out more through Campus Design and Facilities Development (CDFC) and the Office of Environmental Health and Safety (EH&S).

If you need new or special ventilation, please contact either CDFC or EH&S for support.

#### To Reach Us

Telephone: 268-8182

Fax 268-7871

Web: <http://www.cmu.edu/ehs>

Offices: FMS Bldg., 3<sup>rd</sup> floor

#### Bomb Threat Checklist

Jim Gindlesperger

Most of us remember the rash of bomb threats the university received just as the 2007-2008 academic year was beginning. While those threats came in via e-mail, it is possible that anyone here on campus could take a phone call that makes a similar threat. For all bomb threats received

verbally, the individual receiving the call should use the following check list.

Obviously, the caller will likely refuse to answer many of these questions, or may not remain on the telephone long enough to be asked. Get as much information as possible and give the information to University Police immediately:

- Remain calm.
- Be courteous, don't interrupt caller.
- Pretend difficulty hearing.
- Keep caller talking. Ask:
  - When will bomb go off?
  - Where is it located
  - What type of bomb is it?
  - What is your name?
  - Where can I get in touch with you for more information?
- If building is occupied, inform caller that detonation may cause injury or death - gauge caller's reaction.
- Does caller appear to be familiar with campus or area in question?
- Sex and approximate age of caller.
- Origin of call
  - On-campus call (one ring)
  - Outside call (two rings)
- Listen for voice characteristics:
  - \_\_\_ Loud or soft?
  - \_\_\_ High pitched or deep?
  - \_\_\_ Raspy or pleasant?
  - \_\_\_ Intoxicated?
  - \_\_\_ Other?
- Speech type?
  - \_\_\_ Fast or slow?
  - \_\_\_ Distinct or distorted?
  - \_\_\_ Stutter, lisp, nasal, slurred?
- Command of language?
  - \_\_\_ Excellent
  - \_\_\_ Good
  - \_\_\_ Fair
  - \_\_\_ Poor
  - \_\_\_ Foul
  - \_\_\_ Other
- Accent
  - \_\_\_ Local
  - \_\_\_ American, but not this area
  - \_\_\_ Foreign (type of accent, if recognized)
- Demeanor
  - \_\_\_ Calm, angry, emotional?
  - \_\_\_ Rational/Irrational
  - \_\_\_ Coherent? Deliberate?
  - \_\_\_ Laughing
- Any background noises (e.g., traffic, party, music, quiet?)