

Jan – Mar 2008

Upcoming Events
and Reminders

ACHD Air Emissions
Report Data due:
February 1st

EHS/Rad. Safety
Committee Meetings:
January 3rd
March 4th

Inside this issue:

Fume Hoods- They Suck!	2
Paula's Tips	2
Choosing the Right Respirator	2
Fire Safety, Floor Marshals and Evacuations— Oh My!	3
Training Highlight- EH&S Goes Blackboard	3
Hot Links/ Cool Sites	4
Air Quality at Home	4

Questions or concerns regarding this newsletter or safety in general may be directed to:

safety@duq.edu

The Safety Chronicle

• OSHA • CDC • PA DEP • EPA • NIOSH • NFPA • NSC • NRC • ACHD • OSHA • CDC • PA DEP • EPA •

REGULATORY UPDATE:

**OSHA PPE Payment Standard and
DHS Chemical Standard**

• NIOSH • NFPA • NSC • NRC • ACHD • OSHA • CDC • PA DEP • EPA • NIOSH • NFPA • NSC • NRC •

George Bender

OSHA Issues New PPE Payment Standard

The Occupational Safety and Health Administration announced on November 14, 2007 a new standard that clarifies who is responsible for payment of personal protective equipment (PPE). The standard requires employers to pay for almost all PPE that is required by any of OSHA's standards and establishes a clear policy of payment responsibility. It does not create new requirements about which PPE employers must provide, and it does not require payment for uniforms, items worn to keep one's self clean, or any other item that is not defined as PPE.



New PPE Payment Standard requires employers to pay for almost all OSHA-required PPE.

As with any OSHA standard, there are exceptions to this one. Safety-toed foot wear, prescription eyewear, everyday clothing, and weather-related clothing are not eligible for employer payment. The employer cannot require employees to provide their own PPE, but if an employee voluntarily elects to use PPE that he or she owns, employ-

ers are not required to reimburse the employee for the PPE. When the employee does provide his or her own PPE, the employer is required to ensure that the PPE is adequate to protect the employee from hazards in the workplace.

Payment for replacement of required PPE is the responsibility of the employer. If an employee has lost or intentionally damaged PPE, the employer is not required to pay for its replacement.

This standard goes into effect six months after the date of announcement in an effort to permit employers time to adjust, if necessary, current payment policies. If you have any questions or concerns regarding compliance, please contact George Bender at x5329.

DHS Chemical Facility Anti-Terrorism Standard

In accordance with the Homeland Security Appropriation Act, the Chemical Facility Anti-Terrorism Standard, risk-based performance standards, were developed to protect chemical "stockpiles" in the U.S. from the threat of terrorists and others who would seize these chemicals for use as weapons.

The Department of Homeland Security (DHS) introduced on June 8, 2007 new regulations which require any facility

that possesses or plans to possess any one of approximately 300 chemicals over certain threshold quantities to:

- Determine if the facility may be covered by the regulations;
- Register with DHS;
- Complete a "Top Screen" self-evaluation;
- Prepare a security vulnerability assessment, if DHS determines it is a "high risk" chemical facility; and
- Prepare a site security plan, if DHS determines that it is a "high risk" chemical facility.



For more information, go to:
www.dhs.gov/chemicalsecurity

EH&S is currently in the process of determining our status because we do have a number of DHS' "Chemicals of Interest" (COI) on campus. Once labs in Mellon Hall complete a COI survey indicating amounts of chemicals currently stored, EHS will determine if the standard is applicable and a "Top Screen" evaluation necessary.

It is quite possible that the regulations will not affect us. In the meantime, just sit tight, and we will report back when our initial efforts are complete.

Fume Hoods– They Suck!

Paula Sweitzer

Have you ever walked through the Pharmacy, Chemistry, or Biology floors of Mellon Hall and smelled a chemical odor? Have you ever thought to yourself: “I wish we had something to suck these bad odors out!” Well, with a properly used fume hood, you shouldn’t have to smell any odor when you walk through the hallways of Mellon Hall.

Fume hoods work at their maximum potential when the doors to that area are kept closed. Those fume hoods in the labs are the only means of removing air from that area. When the doors are left open, air is being pulled in from the hallway while odors leak out. When the doors are closed, this creates a strong pull of negative pressure, resulting in more air being pulled from that

specific area, through the fume hood and out of the building.

Chemical odors in the hallways are due to laboratories’ doors being left open, which causes a disturbance in the air flow. Many lab doors are left open for easy access in high traffic areas. Creating a safe work environment means making a choice between what is easy and what is right: open doors or the safety of our workers?

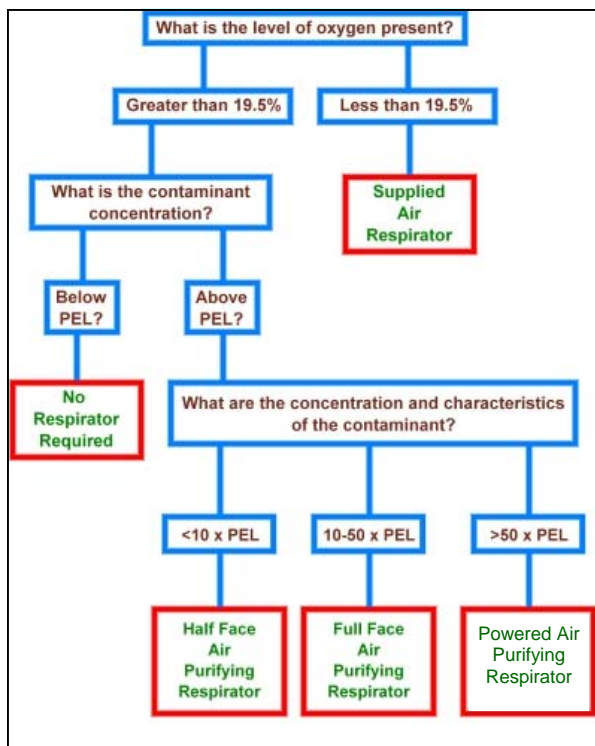


For optimal fume hood operation, keep laboratory doors closed at all times.

Paula’s Tips...

Proper Fume Hood Operation

- Confirm that the hood is operational. Make sure switch is in the “on” position.
- Maintain operations at least 6" inside the hood face. Use vinyl tape to mark 6" as a visual reminder.
- Lower sash to optimum height. A recommended sash height of 6-8 inches will provide optimum operation.
- Keep head out of hood.
- Keep hood storage to an absolute minimum. Keep only items needed for the ongoing operation in the hood.
- Minimize foot traffic around the fume hood. Movement past the hood can cause competing currents at the face causing vapors to flow out.
- Use extreme caution with ignition sources. Ignition sources can be used in the hood as long as no flammable or explosive vapor-causing materials are in use.
- Replace hood components prior to use.
- Chemical handling. Chemicals should be handled inside hood to prevent inhalation.
- Maintain negative pressure in the laboratory. Keep doors closed at all times.



Colorado State University’s “Respirator Selection Guide.”

<http://www.ehs.colostate.edu/WResp/Home.aspx>

Choosing the Right Respirator

George Bender

Respirator selection can be a pretty confusing task, and we have seen many cases in which lab personnel have chosen the wrong respirator for their application. But fear not, respirator manufacturers have come to the rescue.

Respirators come in a variety of shapes, sizes and levels of protection: half- and full-face masks, particulate respirators and silicone masks as well as a variety of cartridges for different types of chemicals. Most, if not all, manufacturers have respirator selection guides or programs on their websites to assist you. See “Hot Links/Cool Sites” for three links to sites that help you select the make of respirator most appropriate for the material you are working with.

These sites are very user friendly but do require you to

have an idea of the potential exposure concentration. This concentration can be measured using air monitoring equipment or calculated using simple calculations.

If you are not comfortable using these sites to select a respirator with an adequate level of protection, you may contact EH&S any time and we will gladly assist you.

Selecting a respirator isn’t the end of the story. Remember that you must be medically evaluated and fit tested before actually using your respirator in the lab. This evaluation ensures you are healthy enough to use a respirator and that the model of respirator forms a sealed fit.

For more information, check out Duquesne’s “Respirator Program” on the EH&S website.

Fire Safety, Floor Marshals and Evacuations – Oh My!

Vanessa Fowler

The Boy Scouts had it right when they said, “Be Prepared.” While we cannot predict what emergencies or situations we may encounter in the coming year, we can be prepared.

Preparedness starts with awareness. Well, it actually starts with a “P”- but the process of preparedness starts with awareness:

- Know your nearest safety equipment: pull station, fire extinguisher, safety shower and phone (call COPS).

- Know your evacuation route, nearest exit and gathering points.
- Know your Floor Marshal, who is a point of contact before and during an emergency.
- Know how to shut down equipment, pause processes and leave the area safely.

Preparedness continues with practice. Practice evacuations provide a “safe” situation in which everyone can become familiar with the alarm signals in their area and try out the procedures they have learned. Practice evacuations also help safety personnel assess any deficiencies in emergency response.

Unlike every good story, there is no “The End.” Preparedness is an ongoing process of vigilance and precautionary measures. While you can’t see the future, you can prepare for it by attending fire safety training, talking to your Floor Marshal and participating in practice evacuations. You can also stay

If you would like to arrange Fire Safety Training and/or hands-on fire extinguisher training for your department or group, contact Vanessa Fowler at X1506 or fowlerv@duq.edu for more information.

Training Highlight—EH&S Goes Blackboard

Vanessa Fowler

Safety Training is commonly seen as a necessary evil. It is generally understood why we need it, but it is not until we are in a situation to use it that we actually want it. Resistance to safety training is something EH&S personnel across the country struggle with. The EH&S Department at Duquesne acknowledges this struggle, but ensuring that Duquesne’s employees have the information to work and live safely remains a top priority.

In an effort to improve the quality of our training as well

as make it more accessible and efficient, EH&S is transitioning many training modules to an online format through Blackboard. There are many advantages to online training because it is available 24 hours a day and can be accessed on any computer with internet access. This availability minimizes logistical headaches involved with coordinating hundreds of schedules, minimizes lost work time by providing the same amount of in-class training in less time and allows for timely training of new employees, as opposed to waiting for a cohort to arrange in-

class sessions. From a regulatory standpoint, online training helps us better meet stringent record-keeping requirements. And, most importantly, online training offers better assurance of well trained employees. Online training modules provide consistent and focused information (minus the tangents) and require more participation of the part of the employee.

While anyone can self-enroll and access a variety of documents and information on the EH&S Blackboard Community Site, those that are identified as



Log onto Blackboard using your MultiPass and find EH&S under “My Communities” then “University Training.”

needing a certain type of training are personally alerted and provided with information on how to proceed. If you are contacted and instructed to complete a training module, all you need is your MultiPass and the “Guide to EHS Bb Site” that can be found on the EH&S website.

While many safety training classes will be available exclusively online, others more effectively delivered in-person will remain as in-class sessions. Regardless of venue, classroom or Blackboard, your EH&S staff are still readily available to answer questions and address concerns. And whether or not training is in your future, check out the new EH&S Blackboard site as a general resource to help you work and live more safely.

Environmental Health and Safety training on Blackboard.



ENVIRONMENTAL HEALTH & SAFETY

Main Phone: 412-396-4895

Fax: 412-369-5363

E-mail: safety@duq.edu

Website: ehs.duq.edu

**Check us out on
Blackboard!**

**Self-enroll by logging on
to Blackboard and
clicking on
"Environmental Health
and Safety" under "My
Communities!"**

Hot Links

Cool Sites

Fume Hoods

- Northwestern University provides a very useful "Chemical Fume Hood Handbook" on their website: <http://www.research.northwestern.edu/research/ors/labsafe/hoods/>
- Laboratory Design and Construction breaks down fume hood regulation codes and standards: http://www.laboratorydesign.com/public/guild_fume.html

Choosing the Right Respirator

- 3M asks a series of questions to help you find the correct respirator for your work/task: <http://rse1.3m.com/rse1/>
- Get the "Response Guide" from MSA or click on "Search by Chemical Database" for exposure limits and suggested PPE: <http://www.msanet.com/response/index.html>
- North Safety Products is one of many suppliers of quality respirators: www.northsafety.com

"It isn't pollution that's harming the environment. It's the impurities in our air and water that are doing it."

∞ Dan Quayle

Air Quality at Home

Nicole Rodrigues

This time of year, while it continues to grow colder outside, our homes become more susceptible to indoor air pollutants. Dangerous gasses can unknowingly fill enclosed areas and cause serious health effects when fresh air flow is cut off as we winterize by insulating our homes.

Carbon monoxide (CO), known as the "silent Killer," is a colorless, odorless, and tasteless gas formed when oxygen fails to combust completely. There are many sources of CO including, unvented kerosene and gas space heaters, leaky chimneys and furnaces, gas water heaters, generators, stoves, and tobacco smoke. CO affects the body by

replacing oxygen; it binds and holds on to hemoglobin in the blood, forming carboxyhemoglobin. As the concentration of CO increases, less oxygen is bound by hemoglobin for use in the body, and individuals begin to exhibit symptoms of CO poisoning.



CO detectors range in price from \$30 to \$75 dollars. Newer models can last 5 to 7 years.

Most healthy people do not exhibit symptoms of CO

poisoning until levels reach above 70ppm, but as little as 35ppm may initiate effects. (As a benchmark, the area near a properly adjusted stove contains an average of 10ppm CO.) Low concentrations of CO can cause weakness and fatigue; at higher concentrations, symptoms include headache, dizziness, impaired coordination and vision, as well as nausea and even death.

To prevent the risk of CO accumulation, it is important to make sure your home has proper ventilation, especially in heavily insulated or enclosed spaces. Excess production of this CO can be avoided by maintaining appliances and other sources of combustion that could produce carbon monoxide.

CO detectors are also useful in avoiding an accumulation of gas; these devices generally give visual and audible warnings when gas levels reach 50ppm. If exposed to CO for a short time, leaving the area and breathing fresh air usually eliminates the symptoms. When exposed to large quantities of CO or if symptoms persist, seek medical attention.

The long and short...

- Co is undetectable by humans.
- Symptoms include fatigue, dizziness and nausea.
- Perform maintenance on combustion sources and ventilate with fresh air.