

Laboratories

Health, Safety and the Environment

A Monthly Newsletter from Carnegie Mellon's Chemical Hygiene Officer

November 2008

Training Topic of the Month:

All new laboratory employees must received Laboratory Safety training from EH&S as a requirement of the OSHA Laboratory Standard. While there is no OSHA requirement for refresher training in lab safety, we feel that regular review of lab safety topics is essential to a safe work place. Monthly reading of this newsletter will provide such a review. This month's topic is "**Information and Resources**".

Material Safety Data Sheets

1. The most thorough source of chemical information is the Material Safety Data Sheet. This is a document, generally from 2 to 15 pages in length, outlining safety and health details of a particular material. The information includes the following items:

- Name of the material and the manufacturer
- Physical data and characteristics for the material, such as vapor pressure, density, flammability or flash point
- Health hazards of the material
- Any regulatory exposure levels
- Information on handling and storage of the material
- Information on incompatibilities of the material
- Information on the degree of seriousness of the health hazards, such as LD₅₀ studies
- Environmental hazards associated with the material
- Emergency response procedures for the material (i.e., what to do for spills or fires)
- First aid information for exposures to the materials (REMEMBER: do not attempt first aid unless you are trained to do so!)

2. Under OSHA, laboratories are **REQUIRED** to keep and make available any MSDS received, to applicable laboratory employees. Be sure you are keeping any that you receive! Carnegie Mellon policy is that the individual laboratory is required to ensure that a MSDS is *available* to all applicable lab workers for EVERY HAZARDOUS ITEM stored in its room or rooms. EH&S has

provided links to a number of Internet sites that will help you determine the availability of a MSDS for a given material. (Check this out at www.cmu.edu/ehs.) Remember, you don't need to PRINT OUT all of your MSDS, but you need to know they are available on the web. The only exception to this rule is that a "hard copy" paper MSDS must be in the laboratory for EVERY PHS material present in the lab's inventory. (For information on determining what PHS materials you have, please go to http://ehs-alert.fms.bap.cmu.edu/EHSWebSite/pdf/cmuphst_able.pdf. If you cannot find an MSDS for a material you use, please contact me at markb2@andrew.cmu.edu.

Labels

The first and most obvious source of information about a hazardous chemical is the container label. The label will indicate with words or pictograms, the hazards of the material. The narrative information should be clear enough; it may warn of physical hazards (compressed gas, oxidizer, flammable) or of health hazards (corrosive, carcinogen, poison, irritant). Pictograms indicating damaged skin, a skull and crossbones, or a flame, indicate graphically similar hazards.

Other Resources

EH&S has many other safety references available if you need further information on your chemicals. Contact us at 8-8182 for assistance with these.

Laboratory Safety and Hazardous Waste Training

November 21, 2008

9:30 AM to Noon

To be Announced

No December class!!

To register, go to: http://ehs-alert.fms.bap.cmu.edu/EHSWebSite/Training/ClassDescriptons/training_laboratory_safety.htm

*Environmental Subject of the Month:***Toxic Substances Control Act**

The EPA created the Toxic Substances Control Act (TSCA) to address environmental issues not directly addressed by other regulations and legislation. One of the features of TSCA that affects Carnegie Mellon's lab work relates to newly created or synthesized chemicals. Since by definition these are "new" chemicals, there is no record of any health-related effects that their exposures may produce in humans. To begin gathering information in this area, we are **REQUIRED** to document and report any problems or symptoms

we note ourselves in the course of our work with these new materials.

If you create or synthesize new materials in your lab, please contact me at markb2@andrew.cmu.edu. I will explain the very brief and not-at-all-time-consuming activities we need you to do to help the University meet this requirement.

Laboratory Safety Committee

Here at Carnegie Mellon, we have a **Laboratory Safety Committee** (LSC) that consists of representatives from all academic departments with chemical laboratories. The LSC meets five times per year to discuss departmental safety concerns as well as to act as a vanguard to establish proper safety practices and routines on campus. If you have a lab safety or environmental question or problem, **please contact your departmental representative**. They are:

Biological Sciences	Carrie Doonan, David Hackney
Biomedical Engineering	Kerem Pekkan
Chemistry	Karen Stump, Colin Horwitz
Material Science & Engineering	Jason Wolf
ECE	Chris Bowman
Mechanical Engineering	Steve Klim
Mellon College of Science (general)	Chris Borysenko
Chemical Engineering	Paul Sides
Physics	Barry Luokkala
Molecular Biosensor and Imaging Center	Michael Patrick
Civil and Environmental Engineering	Greg Lowry, Ron Ripper
Graduate Students	Herb Miller (MSE)
EH&S	Madelyn Miller, Mark Banister, Jeff Harris, Michael Fouch

Did you know that a single chemical fume hood, running constantly, uses up the same amount of energy at three average-sized houses? With energy costs of approximately \$3,000 to \$5,000 per year?

Hazardous Waste Pick-up Schedule

Mellon Institute	Nov 4, 18, Dec 2, 16	9:30 AM to 11:30 AM
Wean and Doherty Halls	Nov 4, 18, Dec 2, 16	12:30 PM to 3:30 PM
All other main campus locations	Nov 5, Dec 3	9:30 AM to 11:30 AM
PTC	Nov 5, Dec 3	12:30 PM to 3:30 PM
Penn Ave., Robotics Consortium	November 19	
Computers	Nov 6, Dec 4	

To request a waste pick-up or receive waste labels or tags, go to:

http://ehs-alert.fms.bap.cmu.edu/EHSWebSite/Waste_Recycling/HazardousWaste.htm