



# LABORATORIES

## Health, Safety & the Environment

### at Carnegie Mellon University

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A Newsletter from Carnegie Mellon University's Chemical Hygiene Officer

March 2007

## Lab Safety Review

This month's Lab Safety review topic is **Housekeeping**.

Housekeeping-related problems are one of the top causes of laboratory accidents: Bench-tops that are too crowded often cause chemicals or equipment to fall and break while someone is trying to find a clean spot to place them. People trip and fall because aisles are crowded with stored materials and equipment. Serious accidents may become worse and responses delayed because eyewashes, safety showers or fire extinguishers are blocked.

A well-maintained laboratory provides a very favorable impression on outside auditors as well as with possibly influential visitors. It shows that the people in the laboratory care about the health and safety aspects of their workspace and that this is a priority for them. Safety culture is typically one of the primary things that the auditors and visitors are trying to monitor as they check out a lab.

Look over the following list of common housekeeping problems. Correct them if they appear in your laboratory. Please contact me if you need any assistance from EH&S.

1. Stored items are blocking aisles and often exit routes as well
2. Chemical and reagent containers are left throughout the lab instead of being returned to their proper storage areas. This greatly increased the chances of a chemical spill.
3. Unlabeled chemicals in containers or in beakers/flasks are present in the laboratory. These materials have a way of never being removed properly, since they often cannot be identified as to whether they should be saved or not.
4. The lab is very dirty; surfaces have not been cleaned in some time; there is evidence of old spills or leaks of chemicals (especially around balances, and in sinks and fume hoods).
5. Safety equipment is blocked. This includes storage underneath safety showers and blocking of eyewashes and fire extinguishers. **THIS IS A VERY COMMON PROBLEM!**
6. There is insufficient room to work on bench tops and in fume hoods. This is generally due to excessive storage of glassware, books, notebooks, apparatus, etc., that should be placed elsewhere.
7. Sinks are filled with used glassware or otherwise used for storage.
8. Cords, electrical and otherwise, block aisles and/or doorways, creating tripping hazards in the laboratory.
9. Boxes, books and equipment are precariously stored wherever a surface is found open.

After the initial problems are corrected, most people find it very easy to take a few minutes at the end of a day to properly put away the materials they have used and do a quick clean-up, helping to maintain the good housekeeping in the laboratory.

## Disposal of "Empty" Chemical Containers

At least two or three times a year, EH&S gets contacted by a panicked facilities worker, custodian or visitor who has encountered a "nearly empty" chemical container in the trash or in the hallway. They

are panicked because the container label often lists serious hazards or often the container "just looks dangerous". And sometimes, they **ARE** still indeed dangerous. To prevent both real and perceived hazards related to disposed chemical containers, please do the following:

- Empty the container as completely as possible, either by use or by disposal into a hazardous waste accumulation container appropriate for the hazard.
- For water soluble materials, rinse the remaining traces of chemical into the sink with COPIOUS amounts of water. If the material is a high hazard item omit this last step and turn the container itself in as hazardous waste.
- Remove, obliterate or obscure the container label. Alternatively, you can mark the container label "clean and empty".
- Place the cleaned, unidentifiable container in your broken glass container.

Please contact me with any questions you may have about this important process.

## Mercury in the Lab

A very timely topic right now is the presence (and elimination) of mercury from the laboratory. In the past month, EH&S had two separate incidents of mercury spills, one of which required outside contractors to perform the clean-up (at considerable expense.) ***Please, please, please*** go through your laboratory and identify sources of elemental mercury. Evaluate whether you need the device or instrument. For example, mercury thermometers can nearly always be replaced by alcohol ones. A relatively small amount spilled can contaminate a large area of your lab and vital equipment as well. A small amount entering a drain can do considerable environmental damage. Please turn in your mercury items as hazardous waste as soon as you can.

## Upcoming Training—March and April 2007

The next Hazardous Waste and Lab safety trainings will be held Wednesday, **March 21** in MI 348 and Thursday, **April 26** in DH 1209. To enroll, please sign up at:

[http://ehs-alert.fms.bap.cmu.edu/Training/training\\_files/training\\_laboratory\\_safety.htm](http://ehs-alert.fms.bap.cmu.edu/Training/training_files/training_laboratory_safety.htm)

## Upcoming Waste Pick-ups

The following waste pick-ups are scheduled for March and April:

From Mellon Institute, 9:30 - 11:30 AM: **Mar 13, 27, Apr 10, 24**

From Wean and Doherty Halls, 12:30 - 3:00 PM: **Mar 13, 27, Apr 10, 24**

From Porter, Roberts, Hammerschlag and other main campus locations, 9:30 - 11:30 AM: **Mar 14, Apr 11**

From PTC: **Mar 14 and Apr 11** in the afternoon

From Penn Avenue and Robotics Engineering Consortium: Next pick-up is **May 23**

Computers will be picked up **Mar 15 and Apr 12**

***Remember, you need to be present in the lab for the pick-up--if you cannot, make prior arrangements with EH&S to ensure access to the waste.***

Do you need hazardous waste supplies such as bottle labels, waste tags or secondary containment? If so, go to

[http://www.cmu.edu/ehs/Waste\\_and\\_Recycling\\_Programs/Haz\\_Waste/hazardouswaste.htm#HWCertTags](http://www.cmu.edu/ehs/Waste_and_Recycling_Programs/Haz_Waste/hazardouswaste.htm#HWCertTags)

Please print out this newsletter and post or circulate it in your lab!!