



# Department of Occupational and Environmental Safety NEWSLETTER

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CASE WESTERN RESERVE UNIVERSITY

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*(continued on p.3 )*

## In This Issue:

DOES Gets Its Own Server .....	1
Laboratory Inspections .....	1
Safe Housekeeping .....	2
HOT TIPS!: CPM to DPM .....	3
Annual Fire Drills .....	4
Fire Doors .....	5
Sewer Gas Odors? .....	5



## ***What WASTE!* Safe Housekeeping: Keeping Your Lab Clean and Safe**

A majority of accidents stem from poor housekeeping—people are more likely to trip, slip and fall over things left out or left lying around, spills not cleaned up, doors left open. The laboratory is no exception: maintaining good “house”keeping habits in the lab will not only keep the place neat but will also prevent many accidents from occurring. Take a look around and see where you can clean up your act.

1) Clean out your chemical stock. Summer is a good time to put your lab in order, since most students will have left and the lab will be less chaotic. Go through your laboratory shelves and dispose of any chemicals you no longer use or need. We strongly recommend that you do this kind of sorting often for many reasons:

- it keeps disposal costs down since you have smaller amounts to dispose of at one time;
- it reduces the possibility of these chemicals becoming “unknowns,” which can occur if labels fall off or get defaced;
- it reduces hazards in the lab—the fewer chemicals around the better, especially if you are uncertain of some of the compounds.

Remember to submit a new chemical inventory to DOES after you dispose of chemicals. If you transfer some to a co-worker, that person must also submit an updated inventory list.

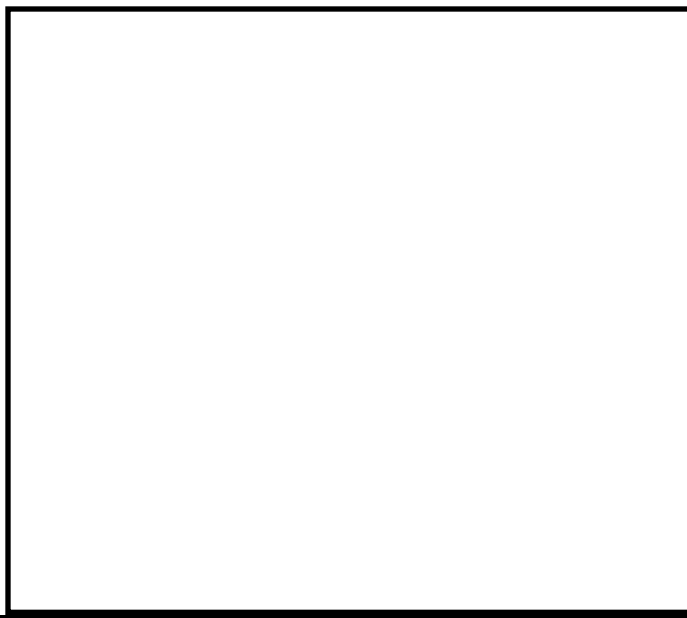
2) Dispose of trash promptly — especially hazardous and radioactive waste. Call DOES (x2906 or x2907) to arrange disposal (with the appropriate accompanying paperwork completed) before 4:00 p.m.

3) Return equipment after using it. Make sure all equipment has a designated location of which everyone is aware and return it to that place if you use it intermittently throughout the day. Don't clutter up the benchtop or workspace. Free up a large enough space to work in safety.

4) Keep cabinet doors closed. An obvious reason would be so that people don't bump or

run into them. But cabinet doors were designed for various safety reasons as well: they keep dust and dirt away from the contents of the cabinet; they prevent materials stored in the cabinet from rolling or falling off the shelves; they allow you to lock up valuable or hazardous materials or equipment. If they are open, they aren't able to do the job they were designed to do.

5) Clean up all spills immediately. If the substance spilled is unknown, flammable, toxic, or otherwise hazardous, block off the area around the spill to prevent it from spreading. Inform your supervisor and ask whether you should clean up the spill yourself or wait for experts.



- Safety information

## HOT TIPS



### CONVERSIONS: CPM to DPM

Contamination surveys must be recorded in units of activity (DPM, or disintegrations per minute), not in count rates, or CPM. When preparing final reports for your own records or for the Radiation Safety Office, this conversion must be completed. CPM and DPM are not interchangeable.

The conversion process requires that you know your instrument's isotope efficiency—don't guess or assume. This includes gamma and liquid scintillation counters (LSC), not only portable counters.

To calculate an efficiency, begin with a known standard (the isotope and activity). The efficiency is the ratio of the count rate divided by the decay-corrected activity. The resulting efficiency can be expressed as a CPM/DPM ratio, a CPM/ $\mu$ Ci ratio, or another applicable ratio for your counting equipment. Typical LSC efficiencies do not exceed 60% for tritium or 80% for 14C.

The formula for conversion is:

$$\text{DPM} = \frac{\text{CPM} - \text{BKGD}}{\text{EFF}}$$

If you wish to express the results in microcuries, the formula for conversion is:

$$\mu \text{ Ci} = \frac{\text{DPM}}{2.22 \times 10^6}$$

You must also know what your instrument's counting windows are for that isotope—ask your PI or find out in the instruction manual. Changing these windows will alter counting efficiencies.

(continued on p.6)

## Annual Fire Drills

The annual practice fire drills for administrative and academic buildings began in June this year and will run through November.

The tentative schedule for the rest of 1996 is as follows:

<b>JULY</b>	<b>AUGUST</b>	<b>SEPTEMBER</b>	<b>OCTOBER</b>	<b>NOVEMBER</b>
Tomlinson, Rockefeller and Strosacker, Smith, Bingham, Baker, Pardee, Adelbert Hall, Wickenden.	Biomedical Research Building (2 days), Kent Hale Smith, White, Glennan, Sears Library (tentatively).	Mather Dance, Emerson Gym, Adelbert Gym, Nursing School, Dental School, Thwing Center, Fribley Commons.	School of Medicine (East, West, and Tower), Dively Building, Enterprise Hall, Mather House, Mather Memorial, Leutner Commons.	MSASS, Guilford House, Hayden, Health Service Building, Gund (Law School), Wade Commons, Freiburger Library (tentatively).

The schedule is, of course, subject to change. The new Kelvin Smith Library and the Olin Building will be scheduled for drills when they are fully occupied. Sears and Freiburger Libraries may not need to be done at all. The dates for the School of Medicine may have to be changed based on the status of the on-going alarm system upgrade project.

The Department of Occupational and Environmental Safety (DOES) asks that all occupants of buildings cooperate during this time.

Department coordinators for each building, who will help with preplanning within their departments, are contacted by DOES prior to the drill to arrange a suitable time. It is important that the coordinators inform employees in their departments of basic procedures to follow (the Evacuation Plan) during a drill and/or emergency.

Individuals who may have difficulty evacuating an area during an emergency or who may have difficulty hearing or seeing an emergency alarm need to have an approved evacuation plan for emergency drills and for actual emergencies. Each individual with a disability (whether temporary or permanent) that could affect communication or mobility must also take the time to become familiar with the existing alarm systems and exits in the buildings s/he frequents. The department's coordinator will assist those who may have difficulty with an evacuation by helping that individual make necessary special arrangements.

Please participate and cooperate when there is a drill or actual event in your building. If you need more information contact your department coordinator or the DOES at x2907.

## Keep Fire Doors Closed

Fire doors are designed and built to withstand the effects of fire and/or heat for a specific period of time. Their purpose is dual: to help contain a fire to a small area until fire-fighting help arrives and to prevent the spread of smoke and hot gases into areas needed for safe evacuation (the means of egress) during a fire emergency. However, they can only achieve this purpose when they are closed.

Perhaps the most important of these doors, but also the ones most commonly propped open, are ones protecting stairwells, a vital part of the means of egress during a fire emergency. Unfortunately, many people think that these closed doors are an inconvenience and will block them open using anything available—little rubber or wooden wedges, folded cardboard, blocks, bricks, a piece of equipment; in one case a five-gallon can of ether was propping a door open. The intent is usually temporary, but often these doors remain open indefinitely because no one remembers to remove the stopper.

In addition to these doors which must remain closed, there is another kind of fire door which may remain open. Used primarily to section off long corridors or to separate major building divisions, these doors are equipped with a device that will close them automatically in the event of a fire in the area.

People also tend to put objects in the closing path of these automatically closing doors. Whether or not this is intentional, this action renders them ineffective in case of fire because they do not close completely.

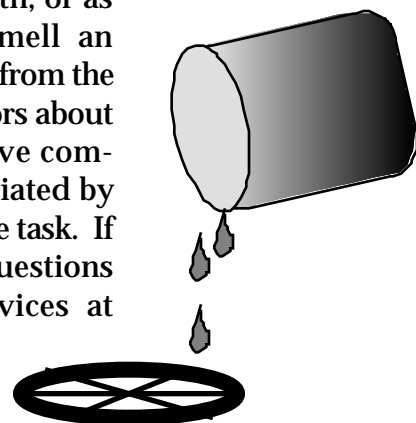


Virtually every building on campus has fire doors. It is important that they all be in the proper position: either closed (in most cases) or open but free from any blockage.

Blocking fire doors

## Sewer Gas Odor?

Remember to regularly hydrate your laboratory's cup sinks and floor drains to prevent sewer gas odors from coming into the lab. Normally there is water in these traps; the odor is caused when they dry out. To prevent this, rehydrate the drains by pouring about five gallons of water into them every two weeks to a month, or as soon as you smell an odor emanating from the trap. Many odors about which we receive complaints are alleviated by doing this simple task. If you have any questions call Safety Services at x2907.



open and/or hindering the operation of automatic fire doors by putting objects in their closing path is a violation of both university policy and various fire codes. The Department of Occupational and Environmental Safety asks that you become familiar with the fire doors of the buildings you frequent. If you see any that are blocked open, remove the blockage and be sure that the door is properly closed. Discuss the situation with your co-workers, supervisors, or depart-

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