

Department of Occupational and Environmental Safety NEWSLETTER

October-November 1997

CASE WESTERN RESERVE UNIVERSITY

VOL. 6 NO.6

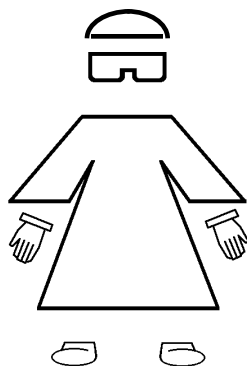
New Laundry Facilities Available

OSHA regulations prohibit employees from taking laboratory coats home to be washed. Further, laboratory coats cannot be washed at community laundromats, leaving few options open to laboratories that do not have on-site washing capabilities. As an alternative, arrangements have been made with University Hospital Laundering Service to clean CWRU laboratory coats at \$0.75 per coat. This service is immediately available.

Laboratory coats should be brought to the laundry in clear plastic bags and given to uniformed personnel. Make sure you have checked all coats for radioactive or chemical contamination before bringing them to the laundry. All laboratory coats must be decontaminated before they are brought to the laundry.

Have the following information when you drop off your coats:

- A valid account number
- PI name
- Laboratory phone number
- Laboratory location



You must have a valid account number with you when you drop off the coats or you will be directly charged for your items. At the time of drop-off, you will receive a laundry ticket for the items, which will be required when picking up

(continued on p.4)

When Your Computer Fails . . .



The university has a backup service that provides backup and archival capabilities. You can store all the information on your computer at another site,

ready to be accessed in case yours fails.

CWRU backup economically provides the desktop user the ability to backup their system unattended, based on user schedule preference and without concern for media management. You select with a mouse the files you want restored based on date or version, and the restore will be done automatically. All data is stored securely and access is protected.

Additional information about the backup service can be found on the web at <http://mvs-tcp4/CWRUbackup>. It includes details about the various platforms supported, security, and off-site storage.

In This Issue:

New Laundry Facilities Available	1
When Your Computer Fails	1
Change in Recycling Procedures	2
Using Dry Ice Safely	2
Inactive AU Status	3
HOT TIPS: Surveys During Experiments . .	3
Latex Gloves: Are You Safe?	4
Using Perchloric Acid in Fume Hoods	4
Hot Work	5



What WASTE!

Change in Recycling Procedures

In an attempt to increase the amount of materials our department receives for recycling, we have made a few changes in the procedure.

Most importantly, we will pick up the material from your lab upon request and return it when the procedure is completed. This will hopefully allow for quicker turn-around. In addition, since most of the material we receive for recycling is acetone wash, we are attempting to locate proper storage containers for the newly-recycled acetone so that no discoloration will occur.

The department's spinning band still is currently set up to recycle acetone. Xylene from histological procedures, as long as it has only traces of wax or alcohol, is also readily recyclable, and we can also recycle ethylene. However, these are not the only options—if your lab produces many gallons of a specific type of waste over a short period of time and you think some of it could be distilled, contact us with the suggestion so we can determine if we can help you.

Recycling is an effective approach to waste minimization and helps us meet government-mandated programs required of all producers of large amounts of potentially hazardous waste. It is also a win-win proposition: it saves you money and minimizes waste. Please look into your lab practices to see how you can contribute to our waste recycling and reclamation program. Call Safety Services at x2907 with any questions about the procedure or to see if your laboratory a good candidate for this program.

Using Dry Ice Safely

Dry ice is so common in the laboratory that it is possible to overlook some of the dangers associated with its use. Remember these tips when working with dry ice:

- Since carbon dioxide sublimates at -70 degrees Celsius, keep dry ice at the proper temperature.
- Avoid lowering your head into a dry ice chest; since carbon dioxide is heavier than air it will expel all respirable oxygen within the enclosed area.
- Use the appropriate dry gloves when handling dry ice.
- Add dry ice slowly to the liquid portion of a cooling bath to prevent it from foaming over.
- Keep dry ice in an open container meant to withstand pressure. Also, make sure that containers stored over dry ice are sealed securely so that they do not absorb carbon dioxide. When such containers are allowed to come rapidly to room temperature, the carbon dioxide may develop such pressure as to cause a serious explosion.

Finally, make sure the cold room/walk-in freezer in your laboratory is at an appropriate temperature for storing dry ice. Failure to maintain this temperature can cause sublimation, resulting in an unsafe atmosphere in a closed room. Call Safety Services with any questions at x2907.

Upcoming Training Sessions

Radiation (x2906)

- **New Training:** Dec.5(1-4), 16(9-12), 30(1-4)
- **Retraining:** Dec.10(2-3), 19(10-11), 29(2-3)
- **X-ray Training:** call office to set up training session

Chemical (x2907)

- **OSHA Lab Standard:** Mondays 1-3 (Service Building Conference Room)

Bloodborne Pathogen (x2907)

- **New Training:** Mondays 3-4:30 (Service Building Conference Room)
- **Retraining:** will resume in January

Inactive AU Status

The Radiation Safety Office (RSOF) has a classification of "Inactive AU" status for PIs whose laboratories do not need to possess or use radioactive materials in the foreseeable future. An inactive AU is relieved of the need to send in monthly inventories, complete laboratory contamination surveys, and attend annual retraining sessions.

To achieve "Inactive AU" status:

- Send a letter of intent to the RSOF.
- Dispose of or transfer all RAM materials in your possession.
- Complete a decommissioning survey for all of your rooms not used by another AU.
- Schedule a confirmatory survey by the RSOF.
- Remove all radiation postings and labels after approval by the RSOF.
- Return all personnel dosimetry to the RSOF.

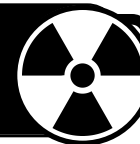
To regain "Active AU" status:

- Send a letter requesting reactivation to the Radiation Safety Officer.
- Update room maps with survey locations.
- Update protocol for general radionuclide usage.
- Update safe radionuclide handling and survey procedures.
- Verify that survey meter instruments are within annual calibration.
- Verify that you and personnel who will use RAM were retrained within the past year.
- Obtain required personnel dosimetry for you and your workers.

If you have any questions or wish to explore inactive AU status for yourself and your laboratory, please feel free to call the RSOF at x2906.



HOT TIPS



Surveys During Experiments

Contamination surveys should be performed before, during, and after any use of radioactive materials. Performing surveys during an experiment will identify radioactive contamination at the time of the contamination and will minimize the risk of it spreading.

Written (recorded) contamination surveys after use of 200 uCi or greater must be performed either immediately after using RAM in work areas (post-experiment surveys), or of the entire laboratory (weekly surveys). If the laboratory is using activities of 200 uCi or less, only monthly surveys are required. Remember the 200 uCi limitation encompasses the total activity in an open vial, not just the activity taken out of it.

Recorded surveys need to include both probe readings and wipe tests of the work area and its immediate surroundings, including floors, equipment or any other item (such as pipettors)

(continued on p.5)

Using Perchloric Acid in Fume Hoods

As a group, perchlorates are unstable chemicals which are highly irritating to the skin and mucous membranes. All inorganic oxidizing agents containing the perchlorate ion, such as potassium perchlorate and magnesium perchlorate, are examples of the group.

Perchlorates and perchloric acid are potentially explosive when heated or mixed with organic compounds, so safety precautions when using them are necessary.

Using perchlorates in a fume hood also demands special safety measures. Note the following safeguards:

- Lower the sash of the hood whenever possible during work with perchlorates as an explosion barrier.
- If this is not feasible, place a portable barricade in front of your perchloric equipment.
- Make sure all perchlorate usage is done in one hood only, dedicated to that purpose. One of the greatest dangers of using perchloric acid in a fume hood is the potential for spontaneous combustion or explosion caused by perchlorate residues in fume hood casings and ductwork. Therefore, extreme care must be taken to prevent perchloric fumes from mixing with other fumes, and designating a special hood is the surest solution. Label the designated fume hood clearly.
- For this same reason, wash down the hood

(continued on p.6)



Latex Gloves: Are You Safe?

Due to increasing concern over glove safety and chemical compatibility, we recommend that you do not use latex gloves when working with chemicals. Try using gloves made from a different material such as nitrile, vinyl, or polyethylene.

The disposable gloves made from these materials will often allow a similar level of dexterity as latex gloves but provide the appropriate protection. However, as with all gloves, be aware of breakthrough time and change gloves frequently to maintain the highest level of protection.

The best course of action when deciding what glove to don is to inform yourself: check glove compatibility charts given in laboratory supply catalogues, and call the manufacturer of the glove if the chemical you are using is not listed. The "Lab Safety Supply" catalogue offers a Safety Techline for workers to call if they need more information on chemical compatibility. Safety Services (x2907) is also available to answer your questions. We urge you to use these and any other available resource.

Latex gloves are still considered safe to use with biological materials.

Again, Safety Services offers these suggestions as alternatives to using latex gloves; call us with any questions about this issue.

New Laundry Facilities Available

(continued from p.1)

your laundry. Laboratory coats can usually be picked up three days after drop-off, and they will be returned on hangers, not in plastic bags.

The laundering service is located on the 6th Floor of the Service Building and is open Monday - Friday from 6:00 am - 2:30 pm. Call the laundry with any questions at 844-1893.



Hot Work

“Hot work” is any operation which produces open flame, sparks or hot particles. These operations include welding, cutting, brazing, soldering, or grinding. When carried out as part of a production process, it is done in an area designed with the necessary safeguards.

However, hot work is often required for on-site maintenance and repair work, such as repairing a piece of equipment in or near a laboratory, repairing or replacing a building component, or renovating or remodeling. These situations can create a very serious fire hazard.

As a precautionary measure taken to control these fire hazards, the university has a Hot Work permits procedure and safety rules which must be followed when hot work is done in-house or by outside contractors. If you directly engage outside service contractors to repair departmental equipment please inform them of our hot work safety rules and insist they follow them.

1) Notify Security (x3333) before starting the hot work and after completing it. They may need to deactivate smoke and/or heat detectors in the area while the work is going on and reactivate them afterwards. They may also need to provide some “special protection” while the alarm system is out of service.

2) Inspect the job site, looking for and removing hazards. Are there combustible materials or flammable/combustible liquids or gases near the work area? Are there any hidden hazards? For example, if you are working on a pipe or duct, you need to know if something is on the other side that could be affected by the flame, heat, and sparks you produce. Check it out, move flammables or combustibles if necessary, and use a flame retardant tarp or other means of protection.

3) A portable fire extinguisher must be on hand at the job site any time this type of work is being done. Get one from Security (x3333) before hot work is begun if one is not available.

4) Under some circumstances hot work may require that a second person be present at the job site to provide a continuous fire watch. If you encounter any job where you feel a second person is needed, check with your supervisor before proceeding.

5) The hot work area should be checked at intervals after the work is completed to be sure that there are no smoldering fires. This recheck after a period of time has elapsed can be done by the department that did the work or by Security.

Please call Safety Services with any questions at x2907.



HOT TIPS



Surveys During Experiments

(continued from p.3)

that may have come in contact with or been splattered with radioactive materials.

“Prudent” surveys, performed periodically during an experiment, do not need to be recorded and may be performed with only a survey meter. Make sure to monitor all of the immediate work areas, equipment, and floors. Survey all equipment, papers etc. before removing them from the work area. Periodically check your hands and feet as well.

Also, make sure you are wearing proper protective equipment (PPE) to provide splatter and contamination protection. PPE used may include gloves, lab coat, goggles, face shield, sleeve protectors, lead aprons, and leadgloves.

Surveys during RAM use, in addition to required monthly, weekly or post-experiment surveys, are an invaluable precaution against the accidental spread of contamination, and we highly recommend making them part of your laboratory protocol. Please call the Radiation Safety Office with any questions about surveys at x2906.

Using Perchloric Acid in Fume Hoods

(continued from p.4)

designated for perchlorate use weekly, including the fluorescent bulb panel and the ventilator ducts, to remove any acid residues.

Care should also be taken when storing perchlorates—never store them adjacent to organic materials or flammables, and keep them in a low-traffic section of the lab.

Unfortunately and despite safeguards, most accidents involving perchloric acid are severe. Take every possible precaution in working with and storing perchlorates.

Department of Occupational and Environmental Safety Staff

Dr. W. David Sedwick(wds), Director and RSO
Richard Dell (rxd7), Manager, Safety Services
Richard Harley, Loss Prevention Specialist
Karl Von Ahn (kxv), Assistant RSO
Shirley Mele (smm5), Dept. Administrator
Gwendolyn Cox-Johnson(gxc13), Dept. Assistant
Cheryl Palfalvi (cxs13), Dept. Assistant
Carla Kungl (ctk), Technical Writer

Safety Technicians

Todd Crawley (tac9)
Robert Latsch (rnl2)
Marc Rubin (mdr6)
Paige Wietelmann (pew2)

Radiation Safety Technicians

Karen Janiga (kej2)
Joe Nikstenas (jen)
Felice Thornton-Porter (fst2)
Yelena Tigay (yxt13)
Edward Traverso (ejt)
Shirley Xu (sxx)

Department of Occupational and Environmental Safety Case Western Reserve University
216-368-2906/2907 FAX: 216-368-2236
(E-mail) xx266@po.cwru.edu (WWW) <http://does.cwru.edu>