University of California
Environmental Health and Safety Update
San Francisco

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HOLIDAY SAFETY

Another holiday season has arrived and in the interest of public safety at UCSF, the following regulations apply to Christmas trees, wreaths, lights and other decorations for the 1996 Holiday Season. Compliance with these regulations is expected.

FIRE SAFETY REGULATIONS THAT APPLY TO ALL AREAS

DATES FOR DECORATIONS: All decorations must be dismantled and removed as soon as possible after the New Year Holiday, unless requested to do so earlier.

DISPLAY REGULATIONS: The maintenance and display of all trees and other decorations shall comply with the following requirements:

- All natural Christmas trees being used in the hospital and patient areas are required to be live rooted in potted soil.
- All cut natural Christmas trees are required to be treated with fire retardant and must have a State Fire Marshal applicator tag attached to the tree to verify that it has been treated.
- All cut natural Christmas trees must be kept in at least 2 inches of water at all times. The water level must be maintained such that the butt or bottom of the trunk is fully immersed.
- All decorative materials, including synthetic Christmas trees, must comply with flame retardant requirements of the State Fire Marshal's Office.
- The use, maintenance and display of wreaths or garlands constructed in whole or in part from Christmas tree parts, other natural foliage or any portion thereof may be permitted, provided they are treated with a fire retardant the same as for the trees. (Most large Christmas tree lots have a licensed fire retardant applicator that can treat the foliage. It is suggested trees and foliage be purchased at one of these locations since Facilities Management no longer provides this service).
- Decorative materials must NOT be tied or placed so as to obstruct the exit ways or to impair the operations of any sprinkler, fire alarm device, fire extinguisher or fire hose cabinet.
- Candles, fondue pots, oil lamps, incense or other flame producing apparatus are NOT allowed in any of the decoration set-ups.
- High-heat producing lights are NOT allowed. Small twinkle lights having an Underwriters Laboratory (UL) label are acceptable.
- All extension cords must be grounded. Lightweight extension cords or multiple adapters are NOT allowed.
- Electric light cords must NOT be hidden under combustible material such as rugs, drapes, etc.
- Electric lights must NOT be used to decorate metal trees. This practice is extremely hazardous.
- Good housekeeping practices must be maintained. Accumulated gift paper, ribbon, boxes, etc. must be cleaned up before they become fire hazards.

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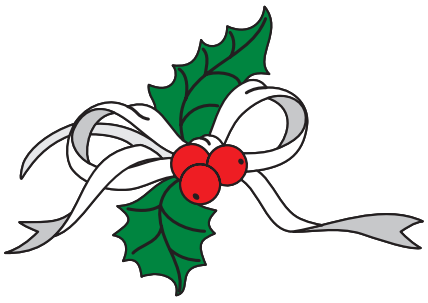

EH&S Training for Laboratory Personnel

UCSF, like other businesses in California, is subject to many environmental, health, and safety regulations which require periodic training of employees. To meet our regulatory obligations and to remind everyone of the hazards associated with the biomedical research laboratory, the Office of Environmental Health and Safety (EH&S) is providing Comprehensive Training to all laboratory personnel during November and December. This training is required for all UCSF laboratory personnel.

The training session, which is approximately one to one and one half hours long, will cover several topics: a brief review of some major EH&S regulations, chemical safety, biological safety, bloodborne pathogens, and radiation safety.

Training will focus on common inspection findings in the UCSF laboratories. To put these findings in perspective, most of the inspections (both by EH&S and by government agencies) have been very positive with no serious violations found. Minor violations occur repeatedly; hence the training will discuss laboratory practices which must be implemented to correct these violations. Dealing only with violations is a somewhat negative approach, but it allows us to keep the training session brief, and to focus on issues most likely to result in employee injury or exposure. Our ultimate goal is the safety of all employees!

If you have not already signed-up for one of the training sessions, please contact your Department Safety Advisor to assist you. Many sessions are available, but all are filling rapidly.

RESPIRATORS

The number of tuberculosis (TB) cases reported to the Centers for Disease Control and Prevention (CDC) has been increasing since 1988, after a long historic decline. In 1992 the California Occupational Safety and Health Administration (CAL/OSHA) issued Interim TB Control Enforcement Guidelines, in 1994 the CDC issued Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-care Facilities, and in 1996 the National Institute for Occupational Safety and Health (NIOSH) updated its respirator testing and certification requirements to permit approval of better respirators for miners and other workers, including hospital employees caring for patients with highly infectious tuberculosis.

As the newly certified respirator is on the market, the Medical Center embarked on a mass respirator fit testing program for over two thousand health care workers who have occasion to work with TB patients. The Office of Environmental Health and Safety (EH&S) assigned six technologists during October and early November to conduct respirator training and fit testing for health care workers. The technologists conducted the testing during all Medical Center shifts (during the week and weekends).

What is the UCSF Respiratory Protection Program?

EH&S is responsible for the Campus respiratory protection program. Cal/OSHA regulations require an employer to supply employees with respiratory protection as warranted by working conditions. The regulations specify that a written program be in place, that records be kept, and that employees be offered medical exams, fit testing, and training in the proper use of respirators.

What is a Respirator?

A respirator is a device which, if used properly, can protect a person's respiratory system from inhalation of hazardous atmospheres. The respirators used by workers to protect themselves should not to be confused with the types used by bedridden patients in the hospital. Only NIOSH certified respirators should be used.

What are the Types of Respirators?

There are two principal classifications:

- Air-purifying respirator - A respirator that removes contaminants such as chemical vapors or particulate matters from the ambient air. It cannot be used in oxygen deficient atmosphere.
- Atmosphere-supplying respirator - A respirator that provides air from a source other than the surrounding atmosphere. This type is often used by fire fighters and EH&S when performing a major chemical spill clean up.

What is an Air-Purifying Respirator?

These are the respirators of choice for most laboratory researchers. They have rubberized face pieces that could be designed as a half mask or a full face mask. The face piece usually has cartridges which can filter out particles such as asbestos fibers or adsorb chemical vapors such as formaldehyde. Cartridges can be obtained for acid gases, organic vapors, ammonia gas, mercury, pesticides and others. Cartridges are color-coded to indicate which type of contaminant they have been designed to protect against.

How Should I Use My Respirator?

Some people wear disposable paper-type respirators for chemical contaminants; however, these do not have sorbent media such as charcoal to remove chemical vapors and do not provide protection against chemical contaminants. If you use the chemical inside a fume hood you are protected. You need to use a respirator if experiments or work process are performed outside of the fume hood. The disposable paper type respirator, if properly fitted, is designed to filter-out dust, mist and other particulate matter of a non-chemical nature. The disposable TB respirator used by the UCSF Medical Center is a N-95 respirator with 95% efficiency filtering-out particles as small as 0.075 micrometers (microns). A typical *Mycobacterium tuberculosis* bacillus carried in microscopic airborne particles is between 1 - 5 microns in diameter. If you use a disposable respirator, discard it at the end of your shift. Particulate filters can be absolute or non-absolute. An absolute filter is designed to protect against TB in which the particles are larger than the pores of the filter. A non-absolute filter contains pores which are larger than the particles to be removed. Such filters use mechanisms such as interception, sedimentation, inertial impaction, diffusion, or electrostatic capture to remove particles.

If you decide to use a rubberized face piece respirator (after consultation with EH&S), please make sure that the filter cartridges employed are suitable for the chemical contaminants you are trying to protect against. If you can smell or taste the chemical after donning the respirator, you may have a "break through", that is, the chemical vapors have saturated the filtering medium and you are breathing the chemical vapors. Also, there are many chemicals that cannot be effectively filtered so the limitations of the filtering cartridges should be fully understood.

Be sure to store your respirator properly. Disposable respirators should be kept inside the original container. A rubberized reusable type can be placed inside a coffee can or a large ziplock bag. Perform a fit check each time the

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(Safety, Cont'd.)

- Smoking, portable heaters or storage of combustibles must NOT be allowed within 4 feet of a Christmas tree.

FIRE

If a fire does occur, after all your efforts:
Rescue. Rescue anyone in immediate danger.
Announce. Call 476-6911 (UCSF), 83 (MT ZION). Sound the building alarm.
Contain. Close all doors as you leave.
Evacuate. Leave the building using the closest exit. Don't go back! It's not worth it!

REMOVAL OF TREES

When decorations are removed from a Christmas tree, the Building Services Division of Facilities Management will remove the tree for disposal.

PARTIES

During the coming holidays, many departments will hold staff parties. Please confine the parties to rooms or assembly areas. Corridors should NOT be used for this purpose. Compliance with these regulations will contribute to your safety and the safety of others, as well as the protection of the University's property.

HAVE A SAFE & HAPPY HOLIDAY SEASON!

EARTHQUAKE SAFETY

With a 90% chance of having a major earthquake in the Bay Area within the next few years, now is the time to review your **Emergency Action Plans.** Does your department have an outside assembly point? Is everything put away as soon as it is used to prevent spillage, contamination and breakage? Are tall objects secured to walls and computers secured to desks? Do you know how to "drop, cover, and hold on"?
Earthquakes can happen, anytime, anywhere. There may be fires following an earthquake. Utility lines will break, leaving areas without electricity, gas and water. There may be damage to highways, bridges and city streets making driving difficult and unsafe. Phones will most likely be out of service or overloaded with calls, and you won't be able to contact your loved ones. Earthquakes and other disasters happen without warning. Emergency workers may not be able to help due to an overwhelming need of their services. Preparation can help you stay safe, so please review your Emergency Action Plan with your staff.
During an earthquake, many injuries will be caused by flying objects, broken glass, and falling debris. All of us, including emergency workers, will be victims of the earthquake. Knowing what to do in an earthquake will help to save lives.
Very few buildings collapse in the United States as a result of earthquakes. Most people who are injured here in earthquakes are hurt by bricks, chunks of concrete, or pieces of glass, which break off buildings and fall to the ground. This is why the most dangerous place to be during an earthquake is outside, next to buildings.

What to Do When an Earthquake Happens

If you are inside when an earthquake begins, stay where you are and take cover. Protect yourself by learning to "drop, cover, and hold on". Drop means to quickly sit or kneel on the ground. Cover means to get under something sturdy and to protect your head and neck with your arms and hands. Hold on means to grab on to the table or whatever is covering you, because it will most likely move during the earthquake. If you are in the hall or on the stairs when an earthquake happens, sit down and brace yourself against the wall or stairs. If you are in bed, stay there and protect yourself with pillows and blankets. If you are outdoors, sit down in an open area away from power lines, buildings and trees.
Be prepared for aftershocks and "drop, cover, and hold on" each time the earth shakes.
One of our most common reactions is to run to check on our children, loved ones, or co-workers after an earthquake. Many people are injured while checking on others without first taking precautions for personal safety. Remember what we said last month, about protecting yourself first, then moving slowly and carefully to check on others and look for other problems.
After you have taken care of yourself and have given first aid to people who need it, you need to check the building for damage. Use a flashlight if it is dark inside the buildings. Do not use candles. Check for fires and gas leaks. Turn off the gas only if you smell gas. Professionals need to re-establish gas service once it is turned off. Look for hazards that can cause problems like broken or sparking electric wires, major cracks in the wall or chemical spills. Leave the building only if necessary.

What to Do After an Earthquake

Much of the damage caused by earthquakes can be prevented by doing some simple things. The same type of hazard mitigation can be done at home and work. Look for the potential hazards such as things that can fall or shake loose like light fixtures, filing cabinets or bookcases. Secure or move them. Water heaters can be knocked over during an earthquake which can cause fires, injuries and water damage. Strap the water heater (with Plumber's Tape) to wall studs to keep it in place.
Cabinets can fly open and anything in them can come flying out and be thrown to the floor. Apply simple latches that hold doors shut to prevent this from happening. Keep essential earthquake supplies at home, work and in your car. Plan with your family and co-workers what you would do in the event of an earthquake. Have meeting places, notices to be left on doors, and out of state contacts well thought out in advance. Plan and practice what to do in the event of an emergency and involve everyone, including your children. Know what to do if you, a member of your family, or co-workers are disabled and unable to function independently. What kind of assistance will you need to prepare for?
Safety is everyone's concern. Preparing for disasters will enable everyone to react in a more calm, assured and safe manner.

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What's Inside:

New Employees at EH&S

This year we have had the pleasure of welcoming several new members to our team at EH&S. The following people have joined the staff since January 1996; please join us in giving them a big hello:

- Michael Ayres, our new Programmer Analyst, will handle computer programming and network issues.
- Lisa Blutman, Training Coordinator, will develop and track EH&S's Training Programs.
- Glenn Funk is the new Biosafety Officer and will manage all aspects of the Biosafety Program.
- Dian Tollinger is Manager of the Campus Program and will manage all issues on the Campus side.
- Irene Anicetti and Melanie Rogers have joined the Administrative Staff.
- Charlene Davis, Technical Committees Coordinator, has joined us from the Office of Research Affairs.

Toaster/Microwave Fires

During a 24 hour period from October 31 to November 1, 1996 three fires occurred at the University of California, San Francisco.

- Fire number one was the result of an employee turning on a toaster and leaving it unattended. The burning toast activated the smoke detector.
- Fire number two was the result of someone placing food in a microwave, setting the oven for the maximum amount of time (the microwave read 45 minutes to go when the fire department arrived on the scene) and leaving it unattended.
- Fire number three was the result of someone placing a thick bagel in a narrow toaster slot and leaving it unattended.

All three fires could have been avoided had employees stayed with the appliance while it was on.

All fires must be reported to the Office of the State Fire Marshal (OSFM), no matter how small. When these fires were reported to Chief Garcia, he stated that if there are any more toaster fires, the OSFM will ban the appliance from the University.

Think before you use a heating device. The fire you prevent may be one in your department.

(Respirators, Cont'd.)

respirator is worn. Check the rubberized type for defects and replace the cartridges as needed. Use a mild soap and water or commercial sanitizing agents to clean and sanitize the respirator. Contact your EH&S Department Safety Advisor if you have further questions.