

Environmental
Health
and
Safety

Safety and Update

R E G U L A T I O N S - R - U S

The University of California, San Francisco (UCSF) relies heavily on chemicals in research to expand the frontiers of medical knowledge. But, in recent years chemical use has become subject to increasing public scrutiny. The perception that almost all chemicals cause cancer coupled with the occurrence of several major environmental incidents over the past twenty years has prompted the public to support restrictive legislation that governs the use, storage and disposal of chemicals.

UCSF now faces a regulatory environment that is comprehensive and complex. Each regulation has a unique perspective and target population. For example, the Resource Conservation and Recovery statutes regulate the management of hazardous waste to protect the public and the environment, while the Occupational Safety and Health laws apply to employers and protect workers. Also UCSF is situated in a sophisticated metropolitan community which has its own additional set of regulations.

The avalanche of regulations started in the early 1970's with the Occupational Safety and Health Act (OSHA) which ushered in a new era of government interaction with the business community. This legislation was unique: employer responsibility, unan-

nounced inspections, citations, and fines. It set the tone for stricter future laws and steep penalties.

Initially, OSHA focused on physical hazards and the traumatic effects of chemical exposures. The OSHA codes were specification standards, i.e. guardrail specifications, permissible exposure limits, fire extinguisher ratings. Compliance with the specification was presumed to assure a safe environment! Unfortunately, these regulations did not address the insidious effects of long term exposure to low levels of chemicals. Primitive sampling methods, uncertain effect thresholds and delayed onset of symptoms confounded the picture. Then asbestos and PCBs burst on the scene, followed by a parade of chemical carcinogens. The potential to cause cancer terrified the public and provided the emotional climate that facilitated the passage of subsequent legislation regulating chemical use.

OSHA decided on a new approach emphasizing knowledge, information, and training; armed with this the employer and worker could gain control of chemicals and protect themselves. OSHA exhibited this approach in the Hazard Communication (HC) regulation. HC says that the manufacturer, who has the knowl-

edge of the chemical, shall provide that knowledge to the employer. The information is contained in the Material Safety Data Sheet (MSDS) and on pictorial labeling. The employer in turn makes the information available to employees, inventories workplace chemicals, evaluates and manages hazards and trains workers.

This law was well suited to the industrial workplace - large volumes of a few chemicals in the hands of unsophisticated workers (chemically speaking) - hardly a situation that occurs in the research institution. In research, one generally encounters small volumes of a myriad of chemicals, some of which no one knows the identity or effects of for certain. Fortunately, OSHA recognized the dilemma and about five years after the HC Standard, they issued the Laboratory Standard (LS). This presents special problems for University employers since both standards apply. Custodians, trades/craft workers, and office personnel are covered by the HC rules, while laboratory workers are typically under the umbrella of the LS. Fortunately, some of the key requirements are the same. In any work area where hazardous chemicals are present, there must be a written plan for identifying and labeling hazards, maintaining collections of MSDSs, providing

(Continued on Page 2, See Regulations)

SAFETY TIDBITS

Q What do you do when a piece of equipment is not working properly?

- Ignore it and wait for someone else to take care of it?
- Do you tell your co-workers not to use it?
- Post a sign that says "Do NOT Use"?
- Disable the equipment so it can't be used until repaired?

A All except "a". However, the best answer is "d" if starting the equipment could lead to personal injury. If the equipment is electrical, has moving parts, or generates energy, the "Lock-Out Tag-Out" process should be used. What exactly is "Lock-Out Tag-Out" (or LOTO, as it's often called)? It's a method of ensuring that hazardous equipment is in the "safe" or "off" configuration, and prohibiting operation of that equipment until repaired. LOTO has two elements: a physical locking device that prohibits turning the equipment "on", and a Tag or Label that warns people of the danger. Special labels and covers for wall switches, equipment switches, power cords, and outlets can be obtained from suppliers who sell safety equipment, including Fisher Scientific (1-800-772-6733), Lab Safety Supply (1-800-356-0783), and New Pig (1-800-468-4647).

If you have an item of equipment which is not working properly and you think it may be a safety hazard, your Department Safety Advisor can help you to determine the hazard and to obtain LOTO supplies.

If the equipment poses a safety

hazard, notify your co-workers, post a "Do NOT Use" sign, and "Lock-Out" the equipment until it can be repaired.

Q What personal protection is offered by plugging equipment into a "Surge Suppressor" instead of directly into the electrical outlet?

A None. A surge suppressor is designed to protect delicate electronic equipment from slight surges in the incoming power supply. It offers no protection against electrical shock or electrocution.

It also is NOT designed to increase the capacity of the electrical outlet. Many surge suppressors do have multiple outlets, but their use assumes the total load does not exceed the capabilities of the power source to which it is connected.

Surge suppressors are even limited in their ability to protect your equipment. The quality of the products available varies greatly, as do the specifications and the price.

Surge suppressors are not the "acceptable substitute" for an extension cord, either, and must not be used as such. Use of extension cords is prohibited at UCSF, and surge suppressors used for this purpose are unacceptable.

You won't find surge suppressors in any of the Safety Supply Catalogs, and the reason is clear - they're not safety devices! Don't depend on them to protect your life or the integrity of your laboratory equipment!

(Regulations, Continued)

ongoing training on hazard recognition and control, and notifying employees of their right to obtain this information (Does this sound familiar?). Additional requirements cover topics such as the use of personal protective equipment, medical surveillance and emergency planning.

The unfortunate events in Bhopal expanded the issue of chemical safety out of the workplace into the community. Regulators responded with the "Hazardous Materials Management and Community Right-To-Know" legislation. This law and subsequent amendments opened business operations and facilities to public scrutiny. New requirements emerged, like annual inventories, business plans and permits, incident notification requirements, and chemical safety inspections by the local agencies.

These mandates must be integrated into the Chemical Safety Manual - the guidance document for the Campus Chemical Safety Program. The manual is currently under review within EH&S to make certain it addresses the myriad of regulatory requirements; an updated version will be available soon.

*The EH&S Safety Update
is distributed by the
Office of Environmental Health and Safety.*

*Please direct all responses, letters, comments to:
EH&S Safety Update
UCSF-EH&S
Box 0942
476-1300
email:
EHS%rec@ccmail.ucsf.edu*

*Printed by UCSF Reprographics 476-5900
Printed on 100% recycled paper.*

ARE YOU PREPARED?

A first aid kit should be tailored to fit specific needs. A family kit should be at home, a car kit should be in your automobile, and you should have access to one at your office. Each kit will contain the same basic materials, but additional items specific to the kit being prepared are essential.

First aid kits can be purchased or you can make your own, keeping it in a closed container. A box with lid, a fishing tackle box, a tool box and the like all work well. First aid kits should be kept in an easily accessible place, out of the reach of small children; all older children and adults should be trained in basic first aid skills. Special needs should be considered when putting together a family kit, such as prescriptions, eyeglasses, sugar and insulin for diabetics, and toys for children.

The following is a list of items for a basic first aid kit recommended by the American Red Cross:

- Sterilized gauze squares, assorted sizes
- Rolled gauze 1 each of 1", 2", 3"
- Plain absorbent gauze pads
- Eye pads
- Triangular bandages
- Packet of assorted adhesive dressings
- Roll of adhesive tape
- A pair of small scissors
- A pair of tweezers
- Thermometer
- Tongue blades and wood applicator sticks
- Tube of petroleum jelly or other lubricant
- Assorted sizes of safety pins
- Cleansing agent such as soap

- First aid book

The following non-prescription drugs are recommended for inclusion:

- Aspirin, acetaminophen, or ibuprofen (both adult and child if applicable)
- Anti-diarrhea medication (Pepto-Bismol)
- Antacid
- Emetic
- Laxative (fresh and dried fruits added to the diet will help)
- Eyewash
- Alcohol
- Antiseptic
- Vitamin supplements

Additional supplies you might want to consider are:

- Plastic bags
- Paper cups
- Spoons
- Needle and thread
- Splinting material
- Disposable diapers
- Sanitary napkins
- Formula
- Medicine dropper
- Cotton tipped swabs
- Cold/hot packs
- Cotton
- Tissues
- Salt
- Baking soda
- Matches
- Pre-moistened towelettes
- Hand lotion
- Extra eyeglasses
- Pocket knife
- Elastic bandages
- Contact lenses and supplies
- Sunscreen
- Special medications such as insulin, heart medication, high blood pressure medications.

- Names and telephone numbers of doctors.

Training in first aid is easy to obtain. There are many organizations that provide first aid training. On campus, Outdoors Unlimited offers Standard First Aid and Emergency Response. The American Red Cross offers classes on a regularly scheduled basis, and many fire departments offer residents first aid training as part of their disaster preparedness training.

Your telephone book also has some helpful hints on first aid in the front of the white pages section. During an emergency is not the time to think about what to do! Planning is the key to being safe!

KEEP THE CORRIDOR DOORS CLOSED! A FIRE SAFETY ISSUE

Campus personnel frequently ask our Campus Fire Marshal "When can corridor doors remain open?"

The answer is "All corridor doors should be kept CLOSED at all times UNLESS the door is equipped with an approved automatic closing device. An automatic closing device holds the door open during normal day-to-day activities, but closes the door when a smoke detector or fire alarm is triggered. Some areas at UCSF where this type door can be found are fire doors separating buildings, for example the new Health Sciences Instructional Research (HSIR) elevator lobby fire
(Continued on Page 4, See Doors)

717
Environmental Health and Safety
50 Medical Center Way
San Francisco, California 94143

What's Inside:

*Regulations -
R - Us*

Safety Tidbits

*Are You
Prepared?*

*Keep The
Corridor Doors
Closed*

(Doors, Continued)

doors. Most corridors, however, do not yet have these self-closing doors.

The automatic closing doors are normally held open by an electromagnetic device which, when the alarm is activated, releases the door. The door then automatically closes and provides a barrier against smoke and fire.

The requirement for keeping corridor doors closed comes from the 1994 Uniform Building Code, a set of standards to which most cities in the United States, including San Francisco, adhere. The Code carries the weight of a regulation or law. Details of this code can be obtained from the Campus Fire Marshal at 476-0570.

The purpose of this requirement is to limit spread of fire, smoke and vapors should a fire or accident occur. The doors themselves are constructed to withstand fire up to a minimum of twenty minutes, thus allowing escape from the area.

In the event of a fire, closed doors contain smoke and/or flames inside an area and maintain a clear exit pathway. Should a fire occur in your area, you should Rescue anyone in immediate danger, Announce by calling 476-6911 and sounding the building alarm, Contain the smoke and flames by making sure all doors are closed and Extinguish if safe to do so, if not, Evacuate.

Everyone is expected to follow the fire procedures and act responsi-

bly. Most departments have designated floor wardens in their Department Disaster Plan to ensure the procedures are followed, that everyone has evacuated to the predetermined assembly area, and that all doors are closed.

