University of California
San Francisco
Environmental Health and Safety Update

UCSF RESEARCH NEWS JANUARY/FEBRUARY 1997 VOLUME 97, NUMBER 1

PROVIDING IMPROVED SERVICE

Beginning in the first quarter of 1997, the Office of Environmental Health and Safety (EH&S) will be expanding the service it provides to the campus research community. The Department Safety Advisors (DSA) will now be visiting each research laboratory at least once per quarter.

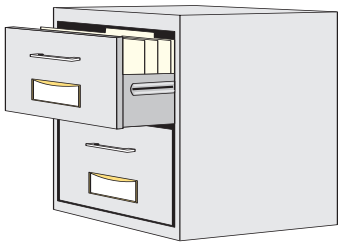
The purpose of these visits is twofold: first, they will enable each laboratory to identify workplace hazards and execute corrective action in real time. Secondly, the visits begin the implementation of the "Comprehensive Laboratory Audits for Safety" (CLAS) program which will facilitate better education and support of the campus research community. The CLAS program will also identify regulatory issues (such as segregation of chemicals) and increase the proactive support of making laboratories safe and compliant. Each DSA will arrive at the laboratory carrying signs, labels, forms, and flyers — all to fix problems on the spot. If your laboratory has had a change in personnel, hazardous materials use, use locations, etc., your DSA will assist you in modifying the appropriate documents, recommending training, evaluating any hazards — in general, your DSA will be a resource for your health and safety concerns.

Briefly, the CLAS Program groups our Audit Program into two categories, "A" (general) and "B" (specific).

The general laboratory audit Category "A" is new. It occurs each calendar quarter for all Principal Investigators (PI). This site visit updates general laboratory information such as hazardous materials usage, users, use locations, equipment, etc. It will also serve to provide person-to-person communication between the DSA and the PI or Laboratory Supervisor in order to review the overall safety tools and methods in the laboratory.

The specific audits of the Category "B" inspections are not new and are those you have experienced in the past. The frequency of these inspections is based on regulatory or UCSF Committee requirements; they occur as follows:

- Radiological is quarterly.
- Biological, Chemical, Fire and Life Safety are annual.
- Controlled Substances and Carcinogens are under review and will be formalized shortly.



Among the safety issues your DSA will be addressing are verification that deluge showers and eyewashes have been tested, verification of proper chemical and other hazardous materials storage, and confirmation that your laboratory has the most current information from EH&S in the form of flyers, newsletters, manuals, and other appropriate documents. DSAs are prepared to demonstrate electronic access of Material Safety Data Sheets (MSDS) and to explain terminology as needed. In many cases, safety deficiencies can be corrected "on the spot" with a label or quick training on equipment usage. We believe this will also eliminate repetitive paperwork.

Please be prepared to contribute about an hour of your time each quarter to workplace health and safety by supporting your DSA during these visits. You may use this as a training opportunity for your staff.

Our resources are somewhat limited, however, we can schedule visits to each laboratory approximately once per quarter. Please do not hesitate to call your DSA for help with any EH&S issue. We are here to assist and consult with you in establishing and maintaining a safe and healthful workplace.

SECURITY OF RADIOACTIVE MATERIALS

Following the recent incidents at the Massachusetts Institute of Technology (MIT) and the National Institutes of Health (NIH) in which investigators had ingested ^{32}P as an "act of a knowledgeable individual", there has been a heightened awareness by the regulatory and health physics community concerning the issue of security of radioactive materials in biomedical research facilities. Radioactive materials are secured and their use controlled in order to protect the users and the general public from the hazards associated with ionizing radiation. The amounts of radioactive material used in biomedical research are minuscule compared to the inventory that may be present in a nuclear reactor environment or

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EMERGENCY PREPAREDNESS

Each of us, at some point in our lives, may be faced with a disaster. The disaster may be a minor inconvenience for us if we are prepared, or a major source of discomfort if we are not. To be prepared, we need to plan on what we need: at home, in our vehicles, at work for ourselves and our department. The American Red Cross recommends that the following list be used to begin your planning. These are items you might want to consider having on hand to last 72 hours in the event of a disaster. Water, food, medicine, and other consumable items should last at least two weeks. When evaluating this list, please keep in mind whether you are preparing for your home or work environment. Talk to your children's school to see what they have on hand and what you might consider adding to their supplies.

Survival Supplies

- Water 2 quarts - 1 gallon per person per day (remember pets, too)
- First aid kit
- First aid book
- Food
- Non-electric can opener
- Blankets or sleeping bag for each person
- Portable, battery-operated radio and extra batteries
- Essential medication, copies of prescriptions and eyeglasses
- A-B-C type fire extinguisher
- Flashlight with extra batteries and bulb
- Watch or clock (either battery or spring wound)
- Battery-operated smoke detector
- Escape ladder for multiple story home
- Food for pets
- Money (coin and paper)

Sanitation Supplies

- Large plastic trash bags and trash cans
- Bar soap
- Liquid detergent
- Shampoo
- Toothpaste and toothbrushes
- Pre-moistened towelettes
- Deodorant
- Denture cleanser
- Feminine supplies
- Infant supplies
- Toilet paper
- Portable toilet chemicals
- Newspaper
- Household bleach

Safety and Comfort

- Sturdy shoes
- Heavy gloves
- Candles
- Matches
- Clothes
- Knife or razor blades
- Garden hose
- Tent
- Hat or cap
- Disposable face masks
- Photos of loved ones

Cooking

- Barbecue, hibachi, camp stove (use outdoors only)
- Fuel for cooking equipment
- Plastic tableware
- Paper plates and cups
- Paper towels
- Heavy duty aluminum foil
- Plastic food wrap

Tools and supplies

- Ax, shovel, broom
- Crescent wrench
- Screwdriver
- Pliers
- Hammer
- Coil of ½ inch rope
- Plastic tape or duct tape
- Pen and paper
- Deck of cards, toys for children
- Pail for carrying water or supplies

Car Mini-Survival Kit

- Non-perishable food, bottled water
- First aid kit and book
- Flares
- A-B-C type fire extinguisher
- Blanket or sleeping bag
- Sealable plastic bag
- Flashlight with extra batteries and bulb
- Essential medication
- Tools such as screwdriver and pliers
- Short rubber hose for siphoning
- Small package of tissues
- Pre-moistened towelettes
- Local maps
- Extra clothes
- Sturdy shoes or boots

Work Mini-Survival Kit

- Non-perishable food, bottled water
- First aid kit
- Emergency Light Sticks
- Flashlight with extra batteries and bulb
- Essential medication
- Heavy Duty gloves
- Change of clothes
- Sturdy shoes or boots
- Pre-moistened towelettes
- Small package of tissues
- Light Weight Tools
- Blanket

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*The **EH&S Safety Update***
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CORRIDORS ARE FOR PASSAGE

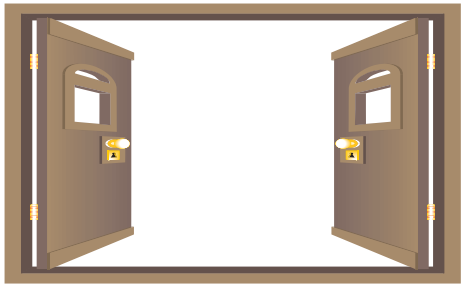
UCSF was recently cited by the State Fire Marshal's Office for having equipment stored in corridors and hallways. We've also been cited for storing hazardous materials (radioisotopes and chemicals) in unlocked hallway refrigerators and freezers.

The use of the corridors and hallways as extensions of laboratories is not permitted. The only permitted use of corridors for equipment is in the Health Sciences East (HSE) and Health Sciences West (HSW) buildings where only pre-existing refrigerators, freezers, or file cabinets, that are within the concrete building supports, may be located outside laboratories. No hallway storage is permitted in any other area.

No hazardous materials are to be stored in hallway refrigerators, freezers or cabinets. All refrigerators and freezers which are currently located in the HSE and HSW corridors must be locked at all times when not in direct use.

It is important to remember that our corridors, hallways, and stairways are escape routes during emergencies (such as fires or earthquakes) and as such, must be kept clear.

If violations of these policies continue, our permission to store and use any equipment in hallways will be revoked by the State Fire Marshal. Individuals authorized to use radioisotopes may find their authorization revoked, as well. For detailed guidelines and an assessment of your area, please call your Department Safety Advisor (DSA).



PERMITS AND LICENSES

As medical research continues to expand across international boundaries, and UCSF investigators share more materials and specimens with their international counterparts, the regulation of transportation of biomedical materials increases. Many such shipments involve regulation by one agency or another, with imports being more heavily regulated than exports.

Most such materials received from outside the country, whether of human or animal origin, require an importation permit or letter of authorization from the Centers for Disease Control and Prevention (CDC); these are easily acquired through the Office of Environmental Health and Safety (EH&S) Biosafety Office at 476-2097. Receipt of animals and animal products from international sources, including tissue culture media containing bovine serum components, may require an importation permit from the United States Department of Agriculture (USDA). The Food and Drug Administration (FDA) regulates medical devices and biologics, and is primarily concerned with devices or materials that have direct patient relevance, such as investigational new drugs or devices, or diagnostic materials. Importation or exportation of these materials may require an FDA license.

Finally, exportation of certain materials or agents, especially human, animal and plant pathogens, toxins, nuclear materials and technology-sensitive materials, is regulated and licensed by the Department of Commerce. In most UCSF cases, a permit or license, when required, will come from either the CDC or the USDA. Failure to have in possession the correct permit or license can lead to delays and frustration at the points of shipment or receipt. Please contact your Department Safety Advisor (DSA) if you have any questions about these permits and licenses.

TRAINING SUCCESS!

The Office of Environmental Health and Safety (EH&S) provided training for 2200 campus laboratory personnel during November and December of 1996! The training covered several topics - safe and proper use of chemicals, biosafety and bloodborne pathogens, and radiation safety operational issues. The training was geared to meet the training requirements of federal, state, and local regulations to which UCSF is subject.

Approximately 30 training sessions were held for the campus laboratory personnel and all were well attended. Feedback from the attendees has been positive, and **we would like to hear comments on how to improve in the future. Please contact your Department Safety Advisor (DSA) with suggestions.**

We at EH&S would like to thank you for your participation in these sessions. This is an indication of everyone's commitment to safety.

If you were unable to attend during this period, please contact your DSA to schedule a make-up session. The training is required for any user of radioisotopes or any user of materials with bloodborne pathogen potential, and is strongly encouraged for all laboratory personnel.

EH&S offers safety, ergonomics, hazardous communications, radiation safety, earthquake preparedness, and blood borne pathogen training, as well as training covering back injury prevention, safety hazards and other important issues. In the near future other topics will be available. If your department is interested in receiving any specialized training, please contact the EH&S training analyst at 502-8278.

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(Emergency, Continued)

Departmental Survival Kit

- Non-perishable food, bottled water
- First aid kit
- Emergency Lighting
- Extra Batteries
- Facility for maintaining temperature of experimental procedures
- Tools
- Portable, battery-operated radio and extra batteries
- Blankets

Keep in mind, the above listing is a suggested list; your individual needs may vary. If your lab has a freezer and your experiment requires that the temperature not vary, how much dry ice will you need to maintain the temperature without power for 72 hours? Keep these things in mind as you plan for your home and work; think about where you will store the necessary items and how you will make do when a disaster strikes.

(Security, Continued)

accelerator facility, therefore, the controls and security measures practiced should be commensurate with the level of actual risk to the user and the general public. The Nuclear Regulatory Commission is guided by the regulations contained in the Code of Federal Regulations 10 Energy. Requirements for the control of radioactive materials are found in Part 20 (sections 20.1801 and 20.1802) which are incorporated into the California Code of Regulations Title 17.

One may argue that the amount of radioactivity of a radionuclide present in storage may not pose a significant hazard. The public and the regulators do not currently share this approach to the matter. Our campus is an open one in which access to the laboratories and the investigators is unhindered. This promotes an atmosphere of openness which is vital to research. The open campus environment brings with it the responsibility of users to secure materials when they are not in attendance or when they are stored in uncontrolled areas. Freezers and refrigerators used to store radioactive materials which are located in uncontrolled areas must be kept locked when unattended.

The increased concern of regulators about the issue of the security of radioactive materials has been felt here at UCSF. During a routine inspection of the radiation producing machines at the Parnassus campus, a state inspector cited the University in a Notice of Violation for failing "to secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas."

The take home message:
When materials are stored in uncontrolled areas, they must be secured.