

# EH&S Safety Matters

University of California, Irvine  
Environmental Health & Safety  
4600 Bison Avenue, Irvine, California, 92697-2725

<http://www.ehs.uci.edu/>  
(949) 824-6200

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## Letter to EH&S

I'm writing as part of my follow-up to Mesa Court's fire that occurred in Lago Hall on February 12, 2005. During the event, our resident advisor, Ryan Ostlie, was the key in insuring that our residents in that community did not suffer greater hardship than they experienced. Ryan used the knowledge he gained from his Fire Safety training with you this summer to extinguish the flames before it reached its flashpoint. He cleared everyone from the community; called 911; checked the door handles in the suite where smoke was observed; and finally (finding the room) properly used the fire extinguisher to put out what could have been a terrible blaze that would have caused extensive damage even with the prompt arrival of the fire department.

The fire marshal went so far as to credit his quick thinking & actions with saving the hall!

I wish I could quantify our luck and our thanks for the training you and your staff provided to our student employees. Without it, the damage to the physical structure (and our community) would have been far greater.

Sincerely,  
Nicki Shaw

**Complex Coordinator**  
**Mesa Court Housing Office**



EH&S Safety Trainer **Jesse Wallace** (Left) and  
Mesa Court Resident Advisor **Ryan Ostlie** (Right)

## REQUIRED SAFETY TRAINING SELF-ASSESSMENT

Do you know what safety training you are required to take? Visit the Training and Employee Development site (TED) at <http://www.ted.uci.edu> to complete your personalized Safety Training Self-Assessment, register for courses and view your tracked progress.

## Ozone Depleting Substances

In our continuing efforts to protect the environment, UC Irvine has developed the Ozone Depleting Substances (ODS) Program for our campus, which can be viewed at: <http://www.ehs.uci.edu/programs/enviro/ozone.html>. The purpose of this program is to gain better control of ODS and to prevent accidental releases. Environmental Health & Safety and Facilities Management have developed a system to assist in meeting your service and repair needs for all refrigerant-containing equipment (water fountains, refrigerators, freezers, air conditioners, etc.).

To request service, contact the Facilities Management Help Desk at x45444 or submit an "On-line Service Request" form, located at the aforementioned web-link. In most cases, Refrigerant Containing Device Service Forms submitted online will be processed on the same business day.

# NEW!

## UCI *Interactive* HAZARDOUS MATERIALS INVENTORY SYSTEM:



### **CiBR-Trac** [si-ber-trak]

Chemical Inventory, Biological & Radio-isotope Tracking system

Welcome to **CiBR-Trac**, the UC Irvine on-line hazardous chemical, biohazardous material, and radioisotope tracking system.

Federal, State and local regulations require UC Irvine to inventory all hazardous materials present on campus, including chemicals, biohazardous materials and radioactive materials. Up-to-date hazardous material inventories effectively track and report the storage and use of these materials. This fulfills the regulatory requirements, and allows all research units on campus to be aware of what is present in their laboratories, and how much is present.

Until recently, chemicals, biohazardous materials, and radioactive materials were tracked using distinct systems employing standard forms or separate computer-based systems. EH&S has recently instituted a new hazardous materials inventory system for the campus research community, one that not only is completely on-line, but is also interactive. Additionally, this database incorporates inventories for all three major categories of hazardous materials.

This online system supports UC Irvine's efforts to maintain compliance with federal, state and local regulations for reporting. **CiBR-Trac** allows authorized users to view, track and update their chemical or radioactive inventory and submit Biological Use Authorizations on a regular basis or when a new chemical, biological or radioactive material is used in a laboratory.

EH&S is in the process of familiarizing each research unit and Principal Investigator on campus regarding the **CiBR-Trac** system's capabilities and login procedures during Laboratory and Building Safety Surveys (LBSS) performed by EH&S personnel. Non-academic units will be contacted individually – **SO STAY TUNED!**

The **CiBR-Trac** database can be accessed under the heading "**Focus On**" located on the EH&S homepage: <http://www.ehs.uci.edu/>. For more information or to obtain a username and password, contact Dick Sun at [dtsun@uci.edu](mailto:dtsun@uci.edu), or x46200.

Are you reading a hard copy of this Newsletter? Wouldn't you rather receive an environmentally friendly electronic copy? Sign up to automatically receive a message when the next issue is available. Go to [http://recordnet.ddm.uci.edu/zotmail/zm\\_lists.html](http://recordnet.ddm.uci.edu/zotmail/zm_lists.html) and click Update under My ZotMail. Or just go to our website at <http://www.ehs.uci.edu/> and click on EH&Safety Matters Newsletter.

## Proper Fume Hood Use and Operation

### Part II

(John Chan)

#### Good Work Practices

- When using the fume hood, keep your face outside the plane of the hood sash and remain alert to changes in air flow.
- Work at least 6 inches back from the face of the hood.
- Always use splash goggles, and wear a full face shield if there is possibility of an explosion or eruption.
- Do not make quick motions into or out of the hood, use fans, or walk quickly by the hood opening. All will cause airflow disturbances which reduce the effectiveness of the hood.
- Substitute less hazardous or less volatile chemicals where possible.
- Look for process changes that improve safety and reduce losses to the environment (e.g. more accurate chemical delivery systems vs. pouring volatile chemicals from bottles).
- Develop a process to evaluate research proposals ahead of time for potential emissions and look for opportunities to reduce them.



#### Proper Sash Use

- Do not remove sashes from sliding sash hoods. The hood should be kept closed, except when working within the hood is necessary.
  - Use sliding sash for partial protection during hazardous work.
  - Do not remove the sash or panels except when necessary for apparatus set-up. Replace sash or panels before operating.
  - Keep the slots of the hood baffles free of obstruction by apparatus or containers.
  - Keep the hood sash closed as much as possible to maximize the hood's performance.
- Remember! Keep the sash closed when not in use to maximize energy conservation.**

In case of exhaust system failure while using a hood, shut off all services and accessories and lower the sash completely. Leave the area immediately.

For more information regarding fume hoods, please contact EH&S at x44817.



## Pollution Prevention and Waste Minimization

(Kirk Matin)

There are a variety of methods to deal with the challenges of hazardous wastes. The most preferable option is to reduce the amount of waste that is produced in the first place. This approach, known as source reduction, is the cornerstone of pollution prevention. Here are some other helpful tips to reduce the amount of hazardous waste generated.

#### Purchasing

Effective waste minimization begins with effective purchasing decisions. The idea is to buy only what you need because if you don't buy it, you don't have to get rid of it.

#### The Myth Of Buying In Bulk

All researchers estimate the quantity of a chemical that they will need before purchasing that chemical. Problems arise when these estimates are inaccurate. An important fact to consider is that the cost savings associated with buying in bulk are frequently offset by the costs of disposing of the unused chemicals.

#### Other Purchasing Strategies

In addition to buying chemicals in smaller amounts, purchasing standard chemicals in coordination with others may be possible. If experiments are designed to use chemicals from an approved list, then another researcher may be able to use your surplus chemicals.

#### Utilize Less Hazardous Chemicals

- Use laboratory detergents rather than hazardous cleaning baths (e.g., substitute detergents for chromic acid solutions).
- Use non-halogenated rather than halogenated solvents (e.g., substitute cyclohexane for carbon tetrachloride).
- Use less toxic/hazardous solvents rather than more toxic/hazardous ones.

#### Encourage Waste Minimization

A good way to get students thinking about waste minimization as they run experiments is to have them actually research waste minimization techniques. Include an experiment that actually gets the students to identify ways to minimize use of hazardous chemicals or generation of hazardous byproducts.

Contact Kirk Matin at x44578 for more information.

## EH&S Directory...

### Administration

Marc Gomez	<a href="mailto:magomez@uci.edu">magomez@uci.edu</a>	4-6889
Helen Templin	<a href="mailto:htemplin@uci.edu">htemplin@uci.edu</a>	4-5828
Glenda Beckett	<a href="mailto:gebecket@uci.edu">gebecket@uci.edu</a>	4-8234
Kim Do	<a href="mailto:nklam@uci.edu">nklam@uci.edu</a>	4-8772
Armi Estrada	<a href="mailto:aestrada@uci.edu">aestrada@uci.edu</a>	4-2250
Alice Lee	<a href="mailto:alicecl@uci.edu">alicecl@uci.edu</a>	4-4815

### Information Technology

Jenifer Swann	<a href="mailto:jmnothr@uci.edu">jmnothr@uci.edu</a>	4-4818
Carol Lu	<a href="mailto:cblu@uci.edu">cblu@uci.edu</a>	4-6311

### Biosafety

Susan Weekly	<a href="mailto:sweekly@uci.edu">sweekly@uci.edu</a>	4-9888
Karla Cornejo	<a href="mailto:kmcornej@uci.edu">kmcornej@uci.edu</a>	4-3069

### EH&S Coordinators

Hamid Arabzadeh	<a href="mailto:hamid@uci.edu">hamid@uci.edu</a>	4-1575
David Melitz	<a href="mailto:dmelitz@uci.edu">dmelitz@uci.edu</a>	4-2941
Joseph Rizkallah	<a href="mailto:jar@uci.edu">jar@uci.edu</a>	4-6579
Rama Singh	<a href="mailto:rpsingh@uci.edu">rpsingh@uci.edu</a>	4-2518
Chris		
Younghans-Haug	<a href="mailto:chrisyh@uci.edu">chrisyh@uci.edu</a>	4-4660

### Environmental Management

Dick Sun	<a href="mailto:dtsun@uci.edu">dtsun@uci.edu</a>	4-2188
Kirk Matin	<a href="mailto:kmatin@uci.edu">kmatin@uci.edu</a>	4-4578
Ricardo Cruz	<a href="mailto:rccruz@uci.edu">rccruz@uci.edu</a>	4-2811
Brian Johnson	<a href="mailto:bijohnso@uci.edu">bijohnso@uci.edu</a>	4-9929
Christian Ritter	<a href="mailto:crritter@uci.edu">crritter@uci.edu</a>	4-6085
Karen Swift	<a href="mailto:ksswift@uci.edu">ksswift@uci.edu</a>	4-2183

### Emergency Management

Linda Bogue	<a href="mailto:lbogue@uci.edu">lbogue@uci.edu</a>	4-7147
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### Fire Safety

Dale Saunders	<a href="mailto:dsaunder@uci.edu">dsaunder@uci.edu</a>	4-4077
Gerald Abbott	<a href="mailto:gabbot@uci.edu">gabbot@uci.edu</a>	4-6093
Aaron Adams	<a href="mailto:asadams@uci.edu">asadams@uci.edu</a>	4-0137
Scott Jackson	<a href="mailto:jacksons@uci.edu">jacksons@uci.edu</a>	4-9665
Alan Sahussanun	<a href="mailto:asahussa@uci.edu">asahussa@uci.edu</a>	4-0155

### Industrial Hygiene

John Chan	<a href="mailto:jwchan@uci.edu">jwchan@uci.edu</a>	4-7101
Lisa Cambria	<a href="mailto:lcmahar@uci.edu">lcmahar@uci.edu</a>	4-8342
James Pack	<a href="mailto:jgpack@uci.edu">jgpack@uci.edu</a>	4-4170
Rito Rincon	<a href="mailto:mxrincon@uci.edu">mxrincon@uci.edu</a>	4-8586
Susan Robb	<a href="mailto:srobb@uci.edu">srobb@uci.edu</a>	4-8791
Alvin Samala	<a href="mailto:amsamala@uci.edu">amsamala@uci.edu</a>	4-4817

### Safety

Sandra Conrard	<a href="mailto:sconrard@uci.edu">sconrard@uci.edu</a>	4-6982
Belinda Manalac	<a href="mailto:bmanalac@uci.edu">bmanalac@uci.edu</a>	4-9524
David Mori	<a href="mailto:dkmori@uci.edu">dkmori@uci.edu</a>	4-9940
Christopher		
San Giovanni	<a href="mailto:csangiov@uci.edu">csangiov@uci.edu</a>	4-0098
Jesse Wallace	<a href="mailto:jwallace@uci.edu">jwallace@uci.edu</a>	4-9864

### Radiation Safety

Debbie Hamano	<a href="mailto:dhamano@uci.edu">dhamano@uci.edu</a>	4-1081
Rick Mannix	<a href="mailto:rcmannix@uci.edu">rcmannix@uci.edu</a>	4-6098
Rocky Dendo	<a href="mailto:ridendo@uci.edu">ridendo@uci.edu</a>	4-4557
Dana Gold	<a href="mailto:goldd@uci.edu">goldd@uci.edu</a>	4-6349
Kathi Harkness	<a href="mailto:kharknes@uci.edu">kharknes@uci.edu</a>	4-4862
Anna Chung	<a href="mailto:achung1@uci.edu">achung1@uci.edu</a>	4-6200

### Training

Jessica Drew de Paz	<a href="mailto:drewj@uci.edu">drewj@uci.edu</a>	x46634
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## Flammable Storage in Science Buildings

(Chris Youngshan-Haug)

Balancing safety rules with the reality of pioneering research where all of the possible outcomes are not known is achieved by working within guidelines that manage risks to acceptable levels. This is true in how UC Irvine manages fire risks created by the storage and use of flammable liquids in our science labs.

Flammable liquids are common in science labs. The liquid's flash point is an easy way to quickly estimate the materials flammability. Flammable liquids have flash points below 100°F.



One way fire risk is managed at UC Irvine is by minimizing quantities in the workplace. Generally, current flammable storage guidelines include:

- Maximum of 25 gallons per laboratory, including flammable wastes;
- No more than 5 gallons on the open bench;
- Storage allowed in approved cabinets only.

Approved flammable cabinets include non-combustible exhausted cabinets, gas cabinets and hazardous materials storage units. Most labs have at least one approved storage cabinet for storing flammables. If you have questions or your lab lacks sufficient storage cabinets to follow campus practices, contact your [EH&S Coordinator](#) for assistance.



## ERGONOMICS WATCH!

(Belinda Manalac)

Are your wrists leaning on the wrist support when typing on the keyboard? Typing with your wrists glued to the wrist rest places the wrists in an extended position (wrists bent back). Also, leaning on the wrist rest puts contact stress directly onto the carpal tunnel. This is why it is important that we "mind the gap" between our wrists and the wrist rest when typing, and make sure that the fingers float over the keyboard while maintaining a straight wrist position. Although our wrists may be easily attracted to the instant comfort that the gel or foam cushions provide, we need to remember to only use the wrist rests when taking a break from typing.