

**WHO DOES IT!**

**WHERE TO FIND IT!**

**HOW TO DO IT SAFELY!**

**A guide to safety and services within the College of Chemistry,  
University of California at Berkeley**

In case of **EMERGENCY**  
**CALL 911**  
or from cell phone 642-3333

For **FIRE**  
**PULL FIRE ALARM FIRST**

**THIS BOOKLET INCLUDES: AN INTRODUCTION TO THE COLLEGE OF CHEMISTRY;  
A SAFETY GUIDE; AN EMERGENCY RESPONSE FLOW CHART; A COMPILATION OF  
BUILDING MANAGEMENT NOTICES; A DIRECTORY OF COLLEGE SERVICES;  
COLLEGE MAPS.**

**Revised: June 2015**

# Laboratory Emergency Guide

CHEMISTRY

## LABORATORY EMERGENCY GUIDE

### WHOM DO I CALL?

#### LIFE THREATENING EMERGENCY

**911** or **(510) 642-3333**

FROM A CELL

### WHAT DO I SAY TO A 911 OPERATOR?

"I am at UC Berkeley and I need help" |

Your Name \_\_\_\_\_

Your Location \_\_\_\_\_ (building name)

floor \_\_\_\_\_ & room number \_\_\_\_\_

Provide Details about:

*Injuries*

*Fire*

*Exposures (substance name)*

*Risk to other people in the building*

*Hazardous spill*

### To report a Hazardous/Radioactive Material Spill

(510) 642-3073; On nights or weekends, (510) 642-6760

To report a **Non Life Threatening Emergency**  
(510) 642-6760, UCPD 24hr Contact  
If you are locked out or need UCPD assistance.

For Chemistry facilities related assistance with leaks, floods, etc., call 643-6060.

Office of Environment, Health & Safety

SAFETY



IS PART OF  
SCIENCE

**Berkeley**  
UNIVERSITY OF CALIFORNIA

**EMERGENCY COMMUNICATION SUMMARY  
FOR ON-CAMPUS INCIDENTS**

**FIRE**

**FIRST  
SECOND**

**PULL FIRE ALARM  
EVACUATE BUILDING**

**INJURY**

**FIRST  
SECOND**

**CALL 911 (CELL PHONE: 510-642-3333)  
CALL 510-643-6060 (During Business  
Hours)**

**CHEMICAL SPILL**

**FIRST  
SECOND**

**CALL 911 (CELL PHONE: 510-642-3333)  
CALL 510-643-6060 (During business hours)**

For all injuries and chemical spills that occur during regular work hours, **call: 911**, THEN call (1) 643-6060, 643-4220; (2) 642-5231, 642-5232.

For Emergency Response Information see Section 10 of the Health and Safety Manual, or Emergency Information on the College of Chemistry Website.

# COLLEGE OF CHEMISTRY LABORATORY SAFETY TRAINING REQUIREMENTS

Principal Investigators and all lab researchers are required to complete the U.C. Laboratory Safety Fundamentals EHS 101 online safety training before beginning any work in the laboratory. (For Chemistry appointed PI's and researchers working in Stanley Hall, Energy Biosciences Building or Hearst Memorial Mining Building be sure to select the 2nd supplement during the training.)

Find the category below that best fits your work status and follow those directions:

**PRINCIPAL INVESTIGATORS, LBL RESEARCHERS, U.C. PAID RESEARCHERS, GSIs, VISITING SCHOLARS, POST DOCS & FELLOWSHIPS WHO HAVE A U.S. SOCIAL SECURITY NUMBER:** To access the training, you must first complete a hiring process through HR. Then, one-to-two days after that process is completed, log into Blu at [blu.berkeley.edu](http://blu.berkeley.edu) and click on the UC Learning Center (along the left side for most). Once you Cal-Authenticate, search for "EHS 101" to take the training. In order to obtain your laboratory keys you must print out the completion page of EHS 101 displaying your name and course completion date. Submit this with your signed key authorization card to Building Management at 119 Gilman Hall to obtain your Laboratory keys.

**PRINCIPAL INVESTIGATORS, LBL RESEARCHERS, U.C. PAID RESEARCHERS, GSIs, VISITING SCHOLARS, POST DOCS & FELLOWSHIPS WHO DO NOT YET HAVE A US SOCIAL SECURITY NUMBER:** To access the training, you must first complete a hiring process through HR. Then, because it takes up to three weeks to get a SSN, you must request temporary access to the UC Learning Center via [ehstrain@berkeley.edu](mailto:ehstrain@berkeley.edu). Shortly after you submit your request, you will be sent access instructions. Upon being granted access, search for "EHS 101" to take the training. In order to obtain your laboratory keys you must print out the completion page of EHS 101 displaying your name and course completion. Submit this with your signed key authorization card to Building Management at 119 Gilman Hall to obtain your Laboratory keys.

**NON-PAID RESEARCHERS/ i.e. REGISTERED UNDERGRADUATE AND GRADUATE STUDENTS** who will not go through a hiring process: To access the training, you must wait one-to-two days after the beginning of a semester or summer session. Then, go to [ehs.berkeley.edu/training](http://ehs.berkeley.edu/training) and click on the UC Learning Center button (right side of the page.). Once you Cal-Authenticate, search for "EHS 101" to take the training. In order to obtain your laboratory keys you must print out the completion page of EHS 101 displaying your name and course completion. Submit this with your signed key authorization card to Building Management at 119 Gilman Hall to obtain your Laboratory keys.

## COLLEGE OF CHEMISTRY LABORATORY SAFETY TRAINING REQUIREMENTS

### IF YOU EXPERIENCE PROBLEMS ATTEMPTING TO LOG INTO THE UC LEARNING CENTER:

Use the UC LEARNING CENTER PROBLEM SOLVER at [ehs.berkeley.edu/training](http://ehs.berkeley.edu/training) to determine the issue. Then, follow the instructions provided for access assistance.

TO COMPLETE A HIRING PROCESS: Contact April May at CoC HR (aprilmay@berkeley.edu). For those of you with space in Stanley Hall or EBB and you are a Chemistry appointed employee contact April. For your personnel in Stanley Hall with appointments other than Chemistry contact Teri Mortimer (terimort@berkeley.edu); and for your personnel in EBB lab space with appointments other than Chemistry, please send your list to Natasha Singh ([n.singh@berkeley.edu](mailto:n.singh@berkeley.edu)).

FOR SPECIAL COURSES IN RADIATION, LASERS & BIO-SAFETY Visit the EH&S in-person training calendar at [ehs.berkeley.edu/training](http://ehs.berkeley.edu/training) or search for "Radiation Safety," "Laser Safety" or "Biosafety" in the UC Learning Center.

You may also contact the Campus Training Manager, Tim Bean, for Assistance at 643- 3482 or at [ehstrain@berkeley.edu](mailto:ehstrain@berkeley.edu).

### **ELECTRONIC ACCESS OF THIS BOOKLET**

#### **ACCESSING THE COLLEGE BUILDING MANAGEMENT HOMEPAGE**

The College of Chemistry Building Management Homepage can be reached at [http://chemistry.berkeley.edu/engineering\\_facilities/bldg\\_mgmt/index.html](http://chemistry.berkeley.edu/engineering_facilities/bldg_mgmt/index.html)

Highlights of the Building Management Homepage include:

#### **"Who Does It! Where To Find It! How To Do It Safely!" (Downloadable pdf file)**

Because of the ever-changing researcher population in the College, the information in this booklet needs frequent updates that could be found on the Building Management homepage.

All items on the pdf file that are written in blue letters are direct "click-on" links to the referenced page, section or website.

#### **College Directory of Personnel**

The Building Management homepage has a link to a complete College Directory that is updated by the College IST unit and includes College e-mail addresses. If your e-mail address does not appear on that directory or if there are any errors in your listing, e-mail Facilities Manager Inna Massen at [massen@berkeley.edu](mailto:massen@berkeley.edu) with the corrections.

#### **Directory of Administration and Services (downloadable pdf file)**

A downloadable one-page pdf directory of administration and service units also appears on the Building Management homepage.

If you have any questions regarding the updating of the "Who Does It!.." or accessing procedures, please contact Inna Massen (3-4220).

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## **INTRODUCTION SECTION**

### **I. WELCOME TO COLLEGE OF CHEMISTRY**

The regard for the well-being of everyone in the College and the community demands that careful attention be given to safety issues.

The protection of health and the environment is a moral obligation. An expanding array of federal, state, and local laws and regulations makes it a legal requirement and an economic necessity as well. In the final analysis, laboratory safety can be achieved only by the exercise of good judgment by informed, responsible individuals and is an essential part of the development of scientists.

The "Who Does It! Where To Find It! How To Do It Safely!" is distributed to everyone entering the College and is available as a downloadable pdf file from the Building Management Website [http://chemistry.berkeley.edu/engineering\\_facilities/bldg\\_mgmt/docs/who\\_does\\_it.pdf](http://chemistry.berkeley.edu/engineering_facilities/bldg_mgmt/docs/who_does_it.pdf). It's required that everyone working in the College reads the Safety Section of the "Who Does It! Where To Find It! How To Do It Safely!" and understands how it relates to his/her work before undertaking any assignments.

### **INJURY AND ILLNESS PREVENTION PROGRAM**

The prevention of work related injuries and illness in all College operations and activities is of critical importance. Every member of the College shares in the responsibility for maintaining a workplace that promotes good health and safety practices. The College of Chemistry Injury and Illness Prevention Program (IIPP) is intended to establish a framework for identifying and correcting workplace hazards within the College. In addition to assigning responsibilities under the plan, the IIPP establishes policies and procedures regarding injury and illness prevention including:

- Identifying and reporting workplace hazards
- Communicating workplace hazards to employees
- Correcting workplace hazards
- Investigating workplace injuries and work related illness
- Health and safety training
- Record keeping requirements

All members of the College should become familiar with the written IIPP which is available via the Internet from the Health and Safety Manual webpage under the Section 3 or at the URL: <http://www.cchem.berkeley.edu/cchasp/?q=section3>. Hard copies of the written plan are also available from the College EHS&S Unit, Room 317 Lewis.

Additional safety information is available in the College Health and Safety Program Manual. That document is available from the College Environment Health Safety & Security program under the Direction of Michael Kumpf 3-0648. The College Chemical Hygiene Plan appears on the College of Chemistry website and within the College Health and Safety Program manual.



## II. ORGANIZATION AND RESPONSIBILITIES, SAFETY IN THE COLLEGE

### A. Dean

Douglas Clark, as the Chief Executive Officer, has the ultimate responsibility for all EH&S matters throughout the College.

### B. Executive Associate Dean

Matt Francis, as the Chief Executive Officer, during Dean's absence.

### C. Assistant Dean for Engineering, Facilities and Capital Projects

Alex Shtromberg provides continuous engineering support for the College Health and Safety Program.

### D. College Safety Committee

The College Safety Committee consists of faculty, staff and students from the Departments of Chemistry and Chemical Biomolecular Engineering and meets quarterly.

During its meetings, this committee examines, evaluates and makes recommendations regarding safety matters. Any member of this committee can be contacted for College safety policy information or to bring issues to the committee as a whole.

### E. College Health and Safety Program

Michael C. Kumpf, Director of the College of Chemistry Environment, Health, Safety & Security program (EHS&S) and the Director of the Emergency Response Group, can be reached at 3-0648 or [kumpf@berkeley.edu](mailto:kumpf@berkeley.edu). He is responsible for implementing College wide health & safety objectives and as a Director of the Emergency Response Group manages the College Emergency Response Program.

- a. **The Emergency Action Directors:** The Emergency Action Directors, under direction of the Emergency Response Director, are a group of persons familiar with the operations and the emergency procedures of the College. During business hours members of this team will provide the logistics to put the College Emergency Response Plan into action in the event of an emergency. In event of after hours emergency, UCPD will notify one of the Emergency Action Directors with a status update of the situation.

- b. Floor Safety Monitors

Floor Safety Monitors work in and are familiar with the College and have volunteered to respond in College emergencies. The Floor Safety Monitors: (1) assist during building evacuations; (2) facilitate communication of emergency information via a phone tree; and (3) will function as roll takers in evacuations during a catastrophic emergency if they are available. Contact the Emergency Response Director, Michael Kumpf or Facilities Manager Inna Massen if you are interested in becoming involved as a member of this team.

### F. Building Operations

1. Facilities Manager (Inna Massen 119 Gilman Hall, 3-4220).  
[massen@berkeley.edu](mailto:massen@berkeley.edu)

2. The Facilities Manager is responsible for all safety matters related to buildings and building equipment and should be contacted for any problems in the following areas:

- Fire fighting equipment (fire extinguishers, fire hoses), fire alarms;
- Emergency showers; and eyewashes, emergency lights;
- Building utilities (power, steam, water, gas, etc.); ventilation (fume hoods, air supply); housekeeping (exits, corridors, elevator lobbies); emergency notification lists; and
- Security

**Any problems with building systems, utilities, fume hoods or ventilation should be immediately be reported to the College Building Management office at 3-6060 or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)**

G. The Campus Office of Environment, Health & Safety (EH&S)

The Campus Office of EH&S, 2-3073, (Mark Freiberg, Director) has overall campus responsibility to assist and oversee Campus management efforts to comply with pertinent environment, health and safety regulations and, to the extent possible, develop additional advisory and support programs that promote a safe and healthful campus work environment. Radiation and laser safety are units within Campus EHS&S. Visit the EHS&S website at <http://www.ehs.berkeley.edu/>

### III. THE COLLEGE BUILDINGS

The seven College of Chemistry buildings are designed and continually improved to provide a safe and healthful working environment. The following information addresses some of the most common safety and health concerns associated with the buildings.

#### A. Building Access

##### 1. Access Authorization

University buildings are public facilities and as such are accessible to the general public during normal "business hours". However, because of the materials used in the laboratories, individuals are not allowed in these areas unless authorized by the room occupant or the College administration. It is the responsibility of persons authorizing visitors to provide them with the following information:

- This site is a major educational research facility utilizing a large number of materials for intermittent periods. It is possible that detectable amounts of one or more hazardous chemicals may be found in this site.
- The established rules for the storage, handling and transfer of all chemicals in the College of Chemistry should prevent personal exposure.
  - While on this site, he/she must remain in the areas designated by the host. Under no circumstances is he/she to go into any laboratory area on this site without authorization from the area occupant or the Building Management Office, 119 Gilman Hall.
  - Safety glasses with side shields must be made available by the host and worn any time inside a laboratory, shop or storeroom.
  - Food and drink are not permitted in laboratories, except in designated clean areas.
  - Consistent with Campus policy, smoking is not permitted in any of the College facilities or other areas, such as balconies, from which the smoke can enter the

building. Campus policy prohibits smoking anywhere on campus as of Jan. 1, 2014..

- An emergency alert is initiated by a steady bell, siren, horn or buzzer; in some cases accompanied by a flashing strobe light and/or synthesized voice announcement. Upon such an alert, posted directions must be followed and the building evacuated as soon as possible.

Any questions or concerns about possible chemical exposure should be addressed to the host or the person authorizing the visit. If there are any further concerns, they may also contact the College of Chemistry Facilities Manager (643-4220), the College Health and Safety Director (643-0648) or the Campus Office of Environment, Health and Safety (642-3073).

2. College Policy Regarding Children in College Facilities

The presence of children in laboratories is allowed in conformance with the UCOP Policy titled: "Monitors in the Workplace". Please click on the [weblink here](#) to view this policy.

Consistent with University policy regarding any non-UC affiliate visitor to Campus, the accompanying parent, caretaker, or guardian assumes all risk for the safety of the child.

3. Accessibility in the College of Chemistry and Americans with Disabilities Act Compliance

Refer to **Appendix X, page 61**, for an accessibility map for the College of Chemistry Plaza indicating the entrances and routes that are handicap-accessible. Copies are also posted on the main Plaza entries to Latimer Hall. Additionally, several undergraduate laboratories in Latimer Hall have been upgraded to accommodate handicap-accessible work-stations including accessible fume hoods. Contact the College Building Operations Manager, Inna Massen (3-4220) for further information regarding accessibility issues in the College or if special accommodation is required.

B. Earthquake Safety Ratings

In 1997, the Berkeley Campus re-evaluated the seismic integrity of most of the buildings on Campus including all of the buildings that comprise the Chemistry Complex. These ratings were based on new information and standards developed following the 1994 Northridge, California earthquake and the 1995 earthquake in Kobe, Japan. As Part of the Campus's Seismic and Life Safety Improvement Project, Hildebrand and Latimer Halls were structurally retrofitted in 2000-2002. The ratings of the College buildings are:

- |                                  |      |
|----------------------------------|------|
| • Giauque Laboratory, built 1955 | Good |
| • Gilman Hall, built 1917        | Fair |
| • Hildebrand Hall, built 1963    | Good |
| • Latimer Hall, built 1962       | Good |
| • Lewis Hall, built 1945         | Fair |
| • Pimentel Hall, built 1963      | Good |
| • Tan Hall, completed in 1996    | Good |

- A "good" rating is given to a building that is expected to experience structural and non structural damage; but would not significantly jeopardize life.
- A "fair" rating is defined as a building that would experience structural damage, but represents a low life hazard to its occupants.

- A "poor" rating is given to a building that is expected to sustain significant structural and non structural damage and/or result in falling hazards in a major seismic disturbance, representing appreciable life hazards.
- A "very poor" seismic performance rating would apply to buildings whose performance during a major seismic disturbance is anticipated to result in extensive structural and non structural damage, potential structural collapse, and/or falling hazards that would represent high life hazard.

It is important to realize that most injuries that result from earthquakes are not caused by structural failure, but by falling objects and broken glass. You must be sure that all heavy equipment and furniture is well fastened to a strong structural support and that heavy and otherwise hazardous objects are not placed where they might injure someone if they fall or move. For more information on earthquake hazard evaluation and/or correction, contact the College Facilities Manager (3-4220).

### C. Ventilation

The overall building ventilation systems ensure that air is continually being replaced so that in the event of an accidental chemical release, the concentration of toxic or noxious chemicals does not exceed acceptable levels. Additionally, there is no recirculating air between labs or offices in the Chemistry buildings and chemicals released in a room cannot enter any other section of the building unless the building systems have been compromised. In all cases the chemical laboratories are negatively pressurized in relation to the adjacent corridors and offices and to the building exterior. Thus, it is absolutely essential that the laboratory doors and windows are kept closed at all times.

With the exception of Tan Hall, College buildings do not have back-up power that will maintain laboratory ventilation in the event of a power outage. Because of this, in the event of a power failure (electricity) balcony doors or adjacent windows (if available) should be propped slightly open and fume hood sashes should remain open a maximum of six inches to encourage "chimney-effect" ventilation in the room. Any containers with potentially noxious or toxic substances should be closed. At all other times, balcony doors and windows must remain closed.

Any questions on how building ventilation works may be directed to the College Building Management Unit or to the Assistant Dean for Engineering, Facilities and Capital Projects Alex Shtromberg (2-2345). Contact Facilities Manager (3-4220) for any further explanation on the safe operation of the ventilation system. Any problems with the fume hoods or ventilation system should immediately be reported to the College Building Management office (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)

Some general guidelines for the safe and appropriate use of fume hoods are:

- Adequate hood performance shall be confirmed prior to use by inspecting the tag on the face of the hood and by checking air flow indicating devices if available. Assistance in determining airflow can be obtained from the College Building Management office (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)
- The position of the dampers, motion sensors, or face velocity controllers that control the exhaust from the hoods should never be changed. Hood systems are very delicately balanced and adjusting the exhaust on one hood affects every other hood on the same system.

- High face velocities will not make a hood safer. Velocities above 150 ft/minute can cause turbulence at the face of the hood causing air from within the hood to contaminate the room.
- Interference with airflow into the hood should be minimized.
- Openings in fume hood front or side panels that were designed for fume hood control system components should never be even partially blocked or used as pass-throughs for hoses.
- Ventilation slots between the air baffles in the rear interior of the hood should not be blocked. This adversely affects the operation of the hood.
- Apparatus should be set up as close to the center of the hood working surface as is practical.
  - Researchers should avoid putting their head inside the hood and should stand a few inches back from the hood sashes when the experiment or reaction is in progress.
  - The horizontal sliding sashes in most of the fume hoods are intended to be used as safety shields. When working in front of the hood with potentially volatile experiments, a sash should be kept between the researcher and the experiment as a face/body shield.
  - Hood sashes should be kept closed whenever immediate access is not required.
  - Sashes should not be removed; one should be able to completely close the front of a fume hood.
  - Storage of chemicals and equipment inside the fume hood should be kept to a minimum.
  - Walk-in fume hoods are intended for large set-ups and researchers should only be in the hood while assembling or making adjustments to equipment. They offer no protection if an individual stands in the hood.
  - Fume hoods shall not be used to dispose of volatile chemicals.

#### D. Fire Rating

The building codes are continually changing and University administration continually upgrading the buildings and eliminating high hazard research from certain locations, the buildings do provide satisfactory fire protection for the occupants.

The corridors and stairwells are the most critical parts of a building for providing safe escape in the event of a fire. Combustible material may not be kept in the corridors nor may any object be placed there that might even partially obstruct exiting. Bulletin boards must be kept neat without an excess amount of paper on them since excessive or loose papers could serve as fuel should a fire break out in a corridor.

Laboratory doors must be kept closed to prevent any fire from entering the corridor. The fire code does allow open doors if they are held open by approved automatic closing devices actuated by a smoke detector. Laboratory door must not be held open, because stored hazardous chemicals may create a problem in the building.

#### E. Asbestos

Asbestos insulation was used extensively during the construction of some of the buildings of the College of Chemistry complex and is gradually being removed. Asbestos that is still in the building represents no health hazard unless the material sealing it has been broken. If you see any insulated pipes with torn or broken covering, please report them immediately to the Building Management Office (3-6060).

#### F. Utilities Shutdowns

Keep in mind that utilities may be interrupted. Equipment which operates unattended must be set to shut down safely in the event of power, water or other utility failure and should not automatically restart on resumption of service. Motors or other equipment could become excessively loaded on restarting and have been known to start a fire. Contact Assistant Dean for Engineering, Facilities and Capital Projects Alex Shtromberg (2-2345) if any engineering assistance is needed in connecting experimental set-ups to building utilities.

As a rule, a utility interruption will trigger the College emergency response notification process; however, if your experiment is particularly sensitive to even a very brief utility interruption that might not activate College emergency response, the installation of a local auto-dialer that can contact you at home or on a mobile phone is recommended. These devices are commercially available.

#### G. Drains

A typical source of smells in rooms are drain traps that are dry (commonly on floors or in eyewashes or seldom used sinks); that is, drains that have lost the seal created by water sitting in the trap. If you have a smell in your room that you cannot identify, the first thing to do is to pour water in any drains that are not in continuous use. The smell should dissipate within 15 minutes. If it does not, contact the College Building Management Office (3-6060).

#### H. Electricity

Accidents involving electricity can be fatal and it is recommended that laboratory personnel know the procedure for removing a person from contact with live electrical conductors and the emergency first aid procedures for a person who has received a serious electrical shock (see **Appendix V, page 52**). Most College laboratories are equipped with 115/208 volt and some with 277/480 volt electrical power. The numerous electrical equipment in the laboratories requires that a great deal of attention be paid to some elementary rules.

1. Never work on electrical equipment unless it is unplugged.
2. No plug is allowed in a laboratory unless it is provided with a ground plug (three-prong plug for any 115 and 208-volt single-phase, four-prong plug for any three-phase plug).
3. No frayed cords are permitted in a laboratory.
4. Extension cords are not to be used to replace permanent wiring, but are only allowed for short-term use such as for portable drills and, when in use, are never to be "daisy-chained" (used in series). Fused plug strips are acceptable, but cannot be used in series with other plug strips or extension cords. Plug strips should be attached to a wall, desk or other raised surface to protect them in the event of a water spill or flood.
5. Electrical equipment that runs unattended in a laboratory must be equipped with manual reset electrical overload devices.
6. Spark-producing electrical devices must not be used in laboratories unless absolutely necessary and then they should be used only away from flammable chemicals and never in a fume hood.
7. Whenever possible, induction motors should be used; series-wound motors require brushes and produce unavoidable sparks.
8. The speed of an induction motor must not be controlled with an auto-transformer; it can overheat and start a fire.
9. Most of the old variable speed motors are series wound.
10. Portable electrical drills, home appliances such as mixers, blenders, vacuum cleaners, etc. have series-wound motors. When such devices are brought into a laboratory, they should be operated away from flammable material.

11. Electrical equipment should be located so that water or other chemicals will not accidentally spill on them.
12. Careful attention should be paid to switching devices so that they are completely enclosed and spark-free.

Additional information regarding the safe use of specific electrical laboratory equipment appears in the College Health and Safety manual available in the EHS&S office, 317 Lewis.

#### I. Floods

Flooding is common in research laboratories where water is used. It occurs mainly when improperly connected hoses become disconnected and, occasionally, as a result of broken water pipes. Should any flooding impact on your work area, contact the College Facilities Management Office (3-6060). During off hours, contact UCPD at 2-6760.

### IV. GENERAL SAFETY INFORMATION

#### A. Personal Protection

##### 1. Safety Glasses

American National Standards Institute (ANSI) "Z87.1" safety glasses are required to be worn in laboratories, shops, and storerooms when there is a potential for splash or fragmented hazard exists. Staff who is required to periodically visit laboratories can obtain either non-prescription safety glasses or goggles to be worn over prescription glasses (both are available in the 791 Tan Hall storeroom). Shops and storerooms have visitor safety glasses available for those people required to enter those areas. For those individuals who require prescription safety glasses to perform their work, refer to **Appendix VI, page 54**, for the procurement of safety glasses.

For information on other personal protection, refer to the College EHS&S program manual.

#### B. Material Safety Data Sheets

Material Safety Data Sheets are filed in 305 Lewis (no key required) where they are available for examining or copying on a nearby photocopier. Electronic copies are available through the College EH&S website. The Aldrich CD-ROM MSDS's are available in the Chemistry Library.

Material Safety Data Sheets contain a variety of information including hazards associated with the material, clean-up procedures in case of spills, and first aid. While this information is in "laymen's terms" and easily understood, if assistance is needed in interpretation, the College EHS&S staff can be contacted (3-0648).

#### C. Hazard Correction

It is the responsibility of the administration to ensure that a hazard determination is promptly followed by the appropriate corrective action.

##### 1. Hazards Associated With the Buildings/Building Systems

Hazards that are associated with the buildings and building systems should be corrected by the administration in a quick and effective manner. These should be immediately reported to the College Building Operations Office (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)

## V. CASUAL LAB VISITS

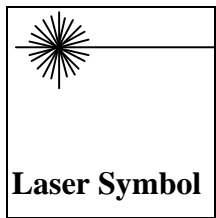
Many employees in the College are periodically required to visit laboratories as part of their jobs. This section presents the safe procedures for such casual visits. Some of this information also appears in equal or greater detail in other sections of this booklet.

### A. SAFE PROCEDURES

1. **PERSONAL PROTECTION:** Safety glasses must be worn at all times in labs; street glasses are sufficient for extremely short visits to laboratories. Protective clothing must be worn in laboratories (long pants, long sleeves or laboratory coat and closed-toe shoes).
2. **YOUR RIGHT TO KNOW (Hazard Communication):** The procedures, information and training described in Parts A and B of this section are designed to assure that you know about any hazardous materials that you might come in contact with so that you can protect yourself from harm. By law, it is your right to know about any hazardous material in the work place. We feel that it is our responsibility to inform you not only about hazardous material, but about any foreseeable hazard in your work place. Feel free to bring to the attention of the Associate Director of College EHS&S, the College Building Operations Manager or any member of the College Safety Committee any questions about hazardous conditions or any safety issue that concerns you.
3. **EMERGENCY RESPONSE:** In any emergency, such as fire or earthquake, follow the directions of your escort or group member.
4. **M.S.D.S's:** Material Safety Data Sheets (MSDS's) are available for all chemicals used in the College and contain safety information regarding specific chemicals. The information they contain includes: if the chemical is flammable; if it is toxic to humans; what protective equipment should be worn when working with it; and the correct way to clean it up if it is spilled. The MSDS's are filed in binders in 305 Lewis (no key required) and you are welcome to refer to them if you have questions regarding any chemical. If you wish, a member of the College staff can go over the information on any particular chemical that might concern you.
5. **WALKING AROUND IN LABS:** **Casual laboratory visitors should be escorted.** Before entering laboratories short safety training on lab hazards should be given to you by your escort or Building Management personnel. Be careful when walking inside laboratories. Look for things like bottles on racks or on benches that could spill if you bump into them and sharp objects that might be on benches or counters and might stick out in such a way that they could injure you. Also, look for any items that are kept on the floor; do not bump into them or knock them over.
6. **CLEAN ROOMS:** There are "clean rooms" in the College that should not be entered without prior approval from the laboratory PI or designee.
7. **GENERAL LAB HAZARDS:** Chemicals and gas cylinders will be found in almost all of the labs in the College of Chemistry. Chemicals can be in solid, liquid, or gaseous form and will be either in their original container or in experimental containers such as beakers and flasks. Be careful when walking around them so that they don't get bumped over. Chemicals



that are known to be toxic (poisonous) to people are kept in the vented cabinets known as fume hoods.

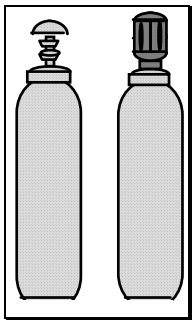


8. **CHEMICAL SPILL:** If there is a chemical spill in a lab, immediately take efforts to contain and control the spilled material from entering the floor or sink drains, if it is safe to do so. If the spill is small, bring it to the attention of any researchers in the lab that will assist in cleaning it up. If the spill is large or the spilled material is unknown, notify the lab occupants to evacuate and dial 911 or (510) 642-3333 from your cell phone. Do not attempt to clean up any large spills or unknown spilled chemicals. Clean-up of chemical spills require special training. Follow up all spills with notification to 3-6060 as immediately as possible.

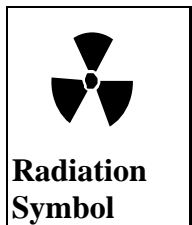
9. **PERMISSION TO ENTER LABS:** As a rule, do not enter any laboratory unless access has been coordinated with the room occupant or the Research Director. Whenever possible, deliveries should be made to offices, rather than to labs. All work inside laboratories should be scheduled with the room occupant. If assistance is needed in contacting room occupants or posting work related notices, Building Operations Manager Inna Massen or her staff can be contacted.

## B. SPECIAL HAZARDS

1. Gas cylinders of all types should be handled with care due to their high-pressure hazard. If knocked over and ruptured they can turn into instant missile projectiles that could cause great bodily injury. All cylinders must be chained to an immovable object to prevent them from falling over. Additionally, cylinders may contain hazardous substances such as flammable or toxic gases that add to the hazards if the cylinder or valve is ruptured. When these cylinders are in use, there are signs posted with specific warnings, please heed all warnings. Gases that are toxic or poisonous are used in accordance with your Toxic Gas Use Approval provided by the Office of EH&S. If you see a cylinder in a laboratory that has not yet been chained, bring it to the attention of your escort or group member.



2. Radioactive substances are used in some of our labs. Learn to recognize the radiation symbol. Some bench tops will have areas covered with paper and bordered by tape with the radiation symbol on it. Work with radioactive substances is done in that area and care should be taken to keep non-essential items away from that space. All areas where radioactive work is performed will be authorized through a Radioactive Use Authorization and posted.



3. Lasers are also used in some of our labs. In all cases, signs are posted on the outside of the door. These signs will say if it is safe to enter the room or not. In some cases, the sign is a red light over the door saying "DO NOT ENTER IF THE LIGHT IS ON". Always follow these signs. You can knock on the door and, if someone answers, identify yourself and he or she will either tell you when you can come back or will assist you in entering the room. In some cases, you may be shown where you can safely walk in the lab. If that happens, do so only when a researcher is in the

lab or specifically follow the researcher's instructions if you are permitted to access the room when it is unoccupied.

**CAUTION**  
X-RAY PRODUCING  
MACHINE WITHIN

4. Biological Hazards (biohazards) are also used in some of the labs. A BUA application is the method by which principal investigators request approval to possess biological agents or materials covered by federal or state

biosafety regulations. Approval is required **before** work can start. A BUA is required to possess or handle the following materials:

- Recombinant agents or materials covered by the NIH Guidelines for Research Involving Recombinant DNA Molecules (<http://www4.od.nih.gov/oba/rac/guidelines/guidelines.html>)
- Infections Agents or materials handled at Biosafety Level 2 or 3 (<http://www.cdc.gov/od/ohs/biosfly/bmb15/bmb15toc.html>)
- Inactivated select agents (<http://www.selectagents.gov/agentToxinList.htm>) or inactivated agents that when viable, are handled at Biosafety Level 3
  - Human blood, body fluids, tissues, or cells (including cell lines)
  - Nonhuman primate blood, body fluids, tissues, or cells (including cell lines)
  - Toxins



All work with biohazards above the BSL2 level will be authorized by a Biological Use Authorization and posted. Biological waste is put in white biohazard bags labeled "Non Medical Waste". These bags are sterilized in autoclaves at over 250°F before disposal. Autoclaved bags show that they have been autoclaved by the presence of black-on-white "autoclaved" tape. (The heat of the sterilizer makes the word "autoclaved" show up on the tape.) Autoclaved bags are safe for disposal in the regular trash. If assisting with a laboratory clean-out, do not throw out any biohazard bags that do not have autoclave tape and show that they have been sterilized. **IF IN DOUBT, ASK.**

5. Super conducting magnets are in use in several rooms in the College mostly on the D level of Latimer, Hildebrand and Tan Halls. These magnets are very powerful and, if you get too close, can harm people who wear heart pacemakers or have any metallic implants as well as pull keys or tools out of a person's hands and erase magnetic stripe cards such as bank cards and credit cards. Besides danger to you, any metal you have on you could potentially affect the magnetic field and do immeasurable damage to the research. These magnets have safe areas marked around them by striped tape. If you go in a room with a large piece of equipment that has tape on the floor around it, always stay outside of the taped area. Caution signs are also placed on the doors to these rooms warning against people with pacemakers entering the room.

**WARNING**  
HIGH MAGNETIC  
FIELD

Do not walk around in a room with these magnets without coordinating with the room

occupant or Research Director.

6. X-ray machines are in use in a few rooms on the ground floor of Lewis. These machines are well shielded and exposure is very unlikely. If a person is working in the room, consult with him or her before entering.

## VI. COLLEGE SECURITY

In recent years, thefts of personal property and equipment from the College have been serious and recently have increased. To frustrate these external elements, all exterior doors must be kept shut during hours they are locked and, whenever possible, **office and lab doors should be locked at all times.** Valuable personal property (wallets, purses, laptops etc.) that you must bring to the College should be kept on your person or in locked drawers or cabinets. The University specifically excludes personal property from its insurance coverage. Students and staff should arrange for valuable mail (checks, etc.) to be delivered to their homes. Computer lock-downs security cables are available at the Scholar's WorkStation on campus or at most computer-related stores although it is very highly recommended that you either take your laptop with you or secure it in a locked drawer or cabinet when leaving your office or lab. **Do not under leave your laptop or valuables in plain sight when leaving your office.**

Report all thefts at your first opportunity to the UCPD at 2-6760 and to Building Management office (3-6060 or 3-4220). We also ask that you adhere to the College policy regarding unauthorized persons in the College:

### A. Unauthorized Persons in the College:

#### 1. During regular work hours (Monday - Friday, 8:00 a.m. – 5:00 p.m.)

If you observe any unauthorized person (anyone whose actions appear suspicious) in the College, challenge his/her presence unless you feel uncomfortable doing so. The challenge must not be confrontational. Simply ask the question, "May I help you?" Depending on the level of your comfort, and upon receiving an answer, continue the questioning or stop. Any time that you conclude that the person might be unauthorized, immediately call the Campus Police at 911 followed by the College Emergency Response number (3-6060) and report the incident. Make sure you can describe the person and the direction that he/she is going.

#### 2. During off-work hours

If you observe any unauthorized person (anyone whose actions appear suspicious) in or around the College, do not challenge his/her presence. Go to the nearest telephone and immediately report the incident to the police by calling 911. Make sure you can describe the person and the direction that he/she is going. When approaching a College entrance, observe if anyone is loitering around the area where he/she might attempt to enter the College behind you.

a. If anyone is loitering, if possible use another entrance.

b. If anyone attempts to enter behind you, and only if you feel comfortable, point out the sign at the door and advise that he/she needs to use the Card Access System to enter the building.

c. If a person enters behind you and you do not feel comfortable talking, ignore his/her presence and go about your business.

In any of the above three instances, go to a telephone as soon as possible and report the incident to the police by calling 911.

### B. College Policy on Issuance of Keys.

1. The following responsibilities are assumed by any person to whom a College of Chemistry key has been issued:

- a. The Lab Safety Final Assessment and Facilities Access Quiz page for the COLLEGE OF CHEMISTRY HEALTH & SAFETY training must be presented to Building Management in order to receive keys to laboratories.
  - b. **Keys are not to be labeled with the room, which they unlock.** Keys are coded in such a way that should a key be lost, the finder will not know what it will open.
  - c. **Keys are not to be used by anyone other than the individual to whom they were issued. Giving keys assigned to you to another individual is considered a misdemeanor under California state law and UC Police have been instructed to confiscate any University keys that do not belong to the person(s) using them as well as may issue a citation to for illegal possession of state property.**
  - d. It is unlawful to duplicate any University key. (Per the Campus "Access Control Policy, November 1, 1991 Revision": "Any person who knowingly makes, duplicates, causes to be duplicated, or uses or attempts to make, duplicate, cause to be duplicated, used, or has in his possession any key to a building or other area owned, operated, or controlled by the State of California...or any state agency... without authorization from the person in charge of such building or area or his designated representative, and with knowledge of the lack of such authorization is guilty of a misdemeanor." (California Penal Code Section 469)
  - e. If you lose your keys you are required to contact UCPD (2-6760) and file a police report and pick up a replacement key form (green form) from Building Management office that will have to be filled out and signed by your PI or supervisor (AA cannot sign this form unless PI is unavailable. If the PI is unavailable and AA does sign for the keys you are required to email your PI and inform him/her that you lost your keys). You are also required arrange an appointment and meet with Facilities Manager Inna Massen to discuss the lost keys. Once all of the above is done you may bring your completed lost key form along with the police report number and obtain new keys. A \$20 non-refundable fee will be charged per key to replace lost keys.  
  
If more than 2 keys to same laboratory were lost during the period of 6 months a group will be required to re-key this facility. You will be asked to provide an account to cover this expense (\$100 per door).
  - f. **Per Campus Security Regulations keys are to be returned to the College Building Management Office immediately upon leaving the College or terminating the relationship for which the key was issued. The College is obligated to report all unreturned keys to UCPD for further actions.**
  - g. College policy allows the issuance of individual building and room access to researchers' significant others if:
    - 1) You anticipate that he or she will visit during off hours and
    - 2) The P.I. for the area approves it.
2. After hours College access is controlled by an electronic card access system which requires the person to present their Cal ID card to the proximity reader in order to gain access. Card access points are located at Latimer Hall plaza elevator lobby north entrance across from

Pimentel, Latimer south and north side plaza entrances, Latimer B-level wishbone stair entrance, Lewis plaza level west entrance, Hildebrand B-level elevator lobby, Hildebrand Breezeway east and west entrance, Hildebrand plaza level entrance, Gilman Hall NE entrance, Tan Hall main lobby, elevator lobby & south stairwell entrance. After hours access must be approved by PI, AA or Supervisor. If a PI has a visitor who needs after hours access and cannot obtain a Cal ID, the PI can provide a chartstring to Building Management and Building Management will order a temporary badge for the visitor to use for the duration of their visit. Lost or stolen Cal ID should be reported to UCPD and Chemistry Building Management immediately,

3. All rooms in the College are keyed to individual keys that are unique to that room(s) that they open:
  - a. #3 Key: Issued to College of Chemistry Graduate Students and Post Docs  
This key accesses general use rooms, including the GSO (Graduate Student Organization) Lounge, the NMR lab, conference rooms & TA rooms.
  - b. Research Group Key: These are authorized at the discretion of the P.I. and access all laboratories for a particular research group.
  - c. Chemistry Elevator Key (This key operates elevators in Latimer, Tan and Hildebrand Hall after hours & is used to access the dry ice box in Receiving): Issued to College of Chemistry Graduate Students, Post Docs, Visiting Scholars and those staff & faculty whose responsibilities require it.
4. Undergraduates, Graduates, Post-Doc and Non-College of Chemistry personnel are required to leave a deposit of \$20 per key which will be refunded when the key is returned to the College. Deposits will only be accepted in the form of personal check, cashier's check or money order. A cash deposit exception is currently being made for international student for some international students.
5. . When keys are returned to Building Management the College will refund the deposit via EFT or check by mail. Please note that there is a \$20 fee should personal check be returned for insufficient funds and keys will need to be returned immediately to Building Management.
4. Cal ID Cards  
The Cal 1 identification card permits, use of College facilities such as copying machines, storerooms, liquid nitrogen dispensers, and off-hours Chemistry Library access. The card is available from the Cal 1 Card Office, 643-6839. Catherine Madsen, 643-1706, connects Cal 1 cards to the College facilities.

## VII. OFFICE SAFETY

Staff who works exclusively in offices should be aware that they have the RIGHT TO KNOW of any laboratory hazards in the surrounding area and they should feel free to discuss any questions or concerns with any member of the College Health and Safety team or College Building Management Unit. Safety is as important in the office as it is in the laboratory and can be divided into two categories: environment and operations.

### A. Office Environment

Offices are evaluated for safety through the office inspections program required by the College Injury Prevention Program.

Offices should be inspected by the occupants and their supervisor using the General Office Inspection form. Tall bookshelves and cabinets (including lateral file cabinets) must be anchored to the wall or made secure by other approved means (contact the Building Management office or College shops). There should be no overhead storage that could create a falling hazard.

Use of surge protectors is highly recommended & they are available for purchase in the Chemistry Storeroom. Extension cords may only be used on a temporary basis and shall not be daisy-chained. If your space is in need of additional electrical outlets please contact Clif Marshal – Electrical shop supervisor (2-4594) so that he may assess possible options.

Use of space heaters is discouraged by the State Fire Marshal however if use of a portable heater is necessary, oil-filled radiator style heaters are the only Fire Marshal approved heaters that may be used. Heaters that do not have automatic shut-offs when tipped over are expressly prohibited. Problems with room heat should be reported to the Building Management (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu). **Please be advised that due to extremely limited Campus Physical Plant resources, comfort heating & cooling issues are not a high priority and repairs may take 7 to 10 working days.**

Furniture arrangement in offices should be such that quick exiting in an emergency is not hindered; housekeeping is important and storage of boxes must also be such that exiting is not hindered. Quantities of paper or other combustibles must be kept at a minimum.

#### B. Operations

It is the responsibility of each employee to perform his or her job in a safe manner adhering to requirement of the Injury & Illness Prevention Program (IIPP) which is found in the College of Chemistry Health & Safety Manual at <http://www.cchem.berkeley.edu/cchasp/>

Ergonomic Evaluations are available through the College of Chemistry EHS&S program. Contact Mike Kumpf (3-0648) or [kumpf@berkeley.edu](mailto:kumpf@berkeley.edu)

### VIII. WORKERS' COMPENSATION

#### A. Workers' Compensation Benefits

A work-related injury or occupational illness is one that results from work or working conditions and/or that occurs when providing service to the employer. The injury/illness can be categorized in three ways: Specific-injury to one or more parts of the body resulting from a specific incident; cumulative-injury from repetitive traumatic activities over a period of time; aggravation of a pre-existing condition or non-work-related condition by an occupational injury or disease. Stress can be compensable under Workers' Compensation.

The benefits include all authorized medical and hospital expenses, partial replacement of income if the worker is temporarily disabled, vocational rehabilitation assistance if needed, permanent disability payments if there is permanent damage from the injury, and death benefits for financial dependents if the injury results in death.

#### B. Workers' Compensation Process

An employee shall notify their supervisor and contact the Front Desk Administrative Assistant (2-5060) in 410 Latimer as soon as possible after an injury or illness occurs. Within one working

day, the A.A. will mail or give to the employee an Employee Claim Form (See Appendix III on page 47) and will complete the Employer's Report of Injury. The forms signed by a PI are sent to the Campus Workers' Compensation unit where they are forwarded on to Professional Risk Management (PRM). Although the employee is not required to send the Employee's Claim form to Professional Risk Management, providing the form to this office guarantees the employee certain legal rights in the Workers' Compensation process and provides for the release of medical records to assist eligibility determination.

PRM will contact the employee, supervisor and treating physician and will pay Workers' Compensation benefits if no question is raised about compensability. If a question is raised, PRM will send a delay letter to the claimant and proceed to investigate the claim. PRM is the University designated office to determine if a Workers' Compensation claim is compensable. If the claim is delayed or denied, the department will also be notified.

#### C. Employee Rights

Section 132a of the California Labor Code declares that an employer may not discharge, threaten to discharge, or discriminate against workers who (a) are injured in the course and scope of their employment or (b) file or intend to file a claim for Workers' Compensation benefits. An employer cannot permanently replace an employee who is receiving supplemental and extended sick leave benefits. The employee continues to accrue vacation and sick leave and service credits while on supplemental leave. Serious and willful misconduct pertains to injuries caused by an employer who knowingly and willingly violates occupational health and safety standards.

#### D. Volunteer Coverage

The Volunteer Register must be completed for each incoming volunteer or non-paid visiting scholar. If an individual is injured in the course of work, this form will be used to assist in determining the appropriateness of Worker's Compensation coverage.

For Workers' Compensation purposes, a volunteer is a person rendering services under University control and direct supervisory responsibility but not receiving any remuneration for services other than meals, transportation, lodging, or reimbursement for incidental expenses. A volunteer is not someone conducting work in the pursuit of personal education goals, receiving remuneration for services from a non-UC payroll, or providing services sponsored by an outside agency. Retired employees, casual visitors, and people working under a contractual agreement are also not volunteers.

**See Appendix IV on page 51** of this booklet for a sample of the Volunteer Registration Form. This form is available from the front desk Administrative Assistant or College HR Manager, and must be on file for an injured volunteer to be eligible for Workers' Compensation.

### IX. UNWANTED MATERIAL DISPOSAL PROGRAM

Refer to the College Health & Safety Manual for a detailed description of the College material disposal program as it applies to chemicals and chemically related materials. Refer also to the Services Section, Item O, EHS&S program for resources for removal of unwanted chemicals and chemically contaminated material.

Everyone working in the College is morally and legally obligated to dispose of unwanted material in ways that pose minimum potential harm both short term and long term to health and the environment. Disposal problems posed by materials must be considered when the material is purchased (refer to the College Health and Safety Program manual). Recycling has priority over the disposal of material.

Material without a present use should be carefully examined and considered "unwanted" if:

- Its presence impairs the housekeeping or safety of the area because of overcrowding or the hazardous properties of the material.
- It is or will become obsolete before the intended use (the shelf life of some chemicals is limited; some equipment cannot be repaired because spare parts are not available; improperly used chemicals can react and become contaminated).
- It can be put to use by others not known to the user.
- The space the material occupies is needed for other purposes.

The College Unwanted Material Disposal Program provides for recycling and putting to use any unwanted material through the College Reuse Facility and College Material Reuse Program, the Campus Department of Excess and Salvage and commercial programs.

#### A. Program Overview

The disposal of unwanted material starts with the user. The user must first decide if the material is no longer needed and is thus a candidate for disposal. Unneeded material is not waste until the decision is made to discard it. All reasonable possibilities for reuse, recovery, and/or recycling must be considered.

#### B. Recyclable Non hazardous Material

Unwanted recyclable non hazardous material can be reported to Building Management (3-6060 or email [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)) for pick-up. Do not leave ANY type of cylinder in the hallways.

This material shall be inspected by College staff to determine the route of disposal and that the material is free of hazards. Before transporting any material, it shall be inspected to ensure that it is free of asbestos, mercury, PCB, chemicals, or any other hazards.

The disposal routes are through the Campus Department of Excess and Salvage and the College Material Reuse program.

#### C. Recyclable Material for Laboratory Use

Refer to the College Health and Safety Program manual for detailed information.

#### D. Non hazardous Material Non-Recyclable within the College

It is the responsibility of the owner of unwanted material that is not hazardous and can not be recycled within the College to properly segregate such material and dispose of it according to this program so as to minimize the harm to the environment and the disposal costs and to maximize the reuse of such material.

##### 1. Trash Room

Common trash from offices and laboratories must be placed into waste baskets provided for this purpose. In laboratory areas, care must be exerted to not mix such trash with hazardous material or material that could be perceived as hazardous.



The common trash from the College is picked up by custodians and brought to the College trash room in the Receiving Dock Area. To prevent contamination of the common trash, the custodians are trained in hazard recognition. The trash room is to be kept locked at all times and only authorized personnel should have entrance access.

a) Commercial Recycling/Landfill

The common trash is picked up from the Trash Room by the Campus Physical Plant and brought to a local recycling company where it is sorted for recycling or for landfills.

2. Recycling

- Mixed paper recycling is actively in practice in the College. Each office and several non-hazardous lab areas have blue bins for mixed paper recycling. Additional satellite sites exist throughout the College. Large gray bins are also located in the Chemistry Receiving dock that is used for the mixed paper recycling program.
- Glassware recycling is currently under re-evaluation. Prior problems with possible contamination have halted the program.
- Newspaper and aluminum can recycling bins are located on the north side of Tan Hall (plaza level) and the south side of Latimer (B-level).

E. Construction/Renovation Debris

Before undertaking the demolition of any equipment or facility, an assessment will be made as to the contamination of the area and the methods to be used for decontamination. The College Health and Safety Unit will coordinate assessments and any required removal of asbestos and/or lead that might be disturbed by the work. Chemical contamination will also be assessed by the College EHS&S team. All material from demolitions should be broken down to manageable size and disposed of as indicated below.

1. Contaminated Material

It is the responsibility of the supervisor carrying out the demolition to ensure that all safety procedures are adhered to and that all contaminated material is segregated and disposed of according to established procedures.

2. Common Trash

The personnel carrying out the demolition are to assure that the common trash is carried to the trash room. Wall board, etc. should be broken down into small pieces and placed in the dumpsters in the Trash Room. Plaster and other dusts or particulate matter is not to be placed in the Trash Room dumpster. Arrangements should be made for a separate dumpster to be used specifically for the particulate construction debris.

3. Fixed Laboratory Equipment (Fume Hoods, Built-in Cabinets, etc.)

It is the responsibility of the individuals conducting the demolition to remove any furniture or equipment from the demolition site. Arrangements should be made with the College Building Management staff to locate items pending permanent disposition. State Fire Marshal regulations prohibit the use of corridors for even temporary storage of such items.

4. Pump and Refrigerator Removal Information

a. FOR PUMPS

- 1) prior to disposal pump oil must be drained from each pump. To arrange for oil removals please contact Clif Marshall – Electrical and electronic shops supervisor (2-4594).
- 2) In addition Excess and Salvage requires a \$55 IOC (per unit) for the residual oil removal. \*\*\*This \$55 IOC has to be payable to Excess and Salvage.
- 3) After the oil has been drained contact Building Management office (119 Gilman Hall) at 3-6060 or email [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu) let them know that the pump is ready to be picked up with IOC & EHS&S paperwork attached.
- 4) The Equipment Disposal Request Form must be filled out. This form can be found on the College of Chemistry form website or can be picked up from Building Management (119 Gilman Hall).  
\*\*\*The signature of a Principal Investigator (PI) or Administrative Assistant (AA) is required to complete the form.

b. FOR REFRIGERATORS

- 1). Fill out the Facilities/Equipment Decontamination Clearance form and tape the clearance form to the refrigerator along with the IOC & disposal form, and notify the Building Management office (119 Gilman Hall) at [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu) that the refrigerator is ready for disposal.  
\*\*\*There is no cost for this service.
- 2). Moving cost for the removal of the refrigerator is: \$55  
The IOC for the moving cost has to be payable to Excess and Salvage.
- 3). Cost for the refrigerant removal service is the \$55 (per unit). The IOC has to be payable to Excess and Salvage.
  - 4). Equipment Disposal Request Form must be filled out. This form can be found on the College of Chemistry form website or can be picked up from Building Management in 119 Gilman Hall.  
\*\*\*A P.I. or A.A. signature is required to complete the form.

5. Ducts

Sheet Metal Ducts may be disposed of as scrap metal (see below) if it has been determined that they are free from contamination. The College Health and Safety Team will evaluate for disposal.

F. Metals and Plastics

Recycling bins for scrap metal and electrical cables are available in the back of the College Machine Shop (Room B4 Latimer). All metals should be brought to B4 Latimer, separated by type of metal, and placed in the appropriate drum. If the item contains several different metals or if you are uncertain as to the type of metal, bring the item to the attention of Machine Shop personnel for determination. Plastic such as PVC, Teflon and Plexiglas are also to be brought to the Machine Shop for recycling.

G. Furniture and Equipment

Unwanted Furniture and Equipment can be recycled within the College or through the Campus Excess and Salvage unit. The items that are recyclable within the College will be made available to other College personnel and, if necessary, stored on a temporary basis at the College storage cage located on B level freight elevator area of Tan Hall. It is the responsibility of the individual disposing of the furniture or equipment to ensure that it is free of any contaminants including radiation. Items suspected of contamination must be checked by the College Health and Safety team before disposal. Contact Building Management Office (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu) for removal of unwanted Furniture and Equipment.

#### DISPOSAL, SALVAGE OR TRANSFER OF INVENTORIAL & NON-INVENTORIAL EQUIPMENT:

1. Excess & Salvage

The Campus operates a Department of Excess and Salvage. This unit makes unwanted material available for sale to other university departments as well as to the public. Items that are not wanted within the College are transported by the College to Excess and Salvage.

2. College Material Reuse

Material with value and probable use within the College is kept in temporary storage. The material, when reused, shall be modified to meet current safety and code requirements. The modification cost will be passed on to the new users.

3. **Lab/Office responsibility for Disposal/Salvage:**

**For disposal of inventorial& non-inventorial items please contact Building Management at 643-6060 or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)**

Complete an *Equipment Disposal/Transfer Request* form and list all inventorial items that you wish to dispose of, also include the UC and College property tags, when applicable. Make sure the items are ready for pickup, i.e.; free of all liquids such as water, oil, **Refrigerant**, etc., and also disconnected from power sources. For proper removal of the **Refrigerant** from the laboratory refrigerators or oil from pumps, please see item 4 on page 25.

DO NOT give equipment items that are tagged with the UC or College barcode numbers to other labs or dismantle them for parts (see the following procedures for equipment transfers within the college). DO NOT dump items in the disposal area, your lab/office are responsible for these items if they are not disposed of properly.

**Lab/Office Responsibility for Disposal/Salvage:** Submit the *Equipment Disposal/Transfer Request* form to Building Management, with the list of items you wish to dispose. If an IOC is required, please include it with your Equipment Disposal Request with the appropriate chart string and the PI's and the Fund Manager's approval.

#### TRANSFER TO ANOTHER LAB GROUP WITHIN THE COLLEGE

**Lab/Office responsibility for transferring to another lab:** Complete an *Equipment Disposal/Transfer Request* form and list all items that you wish to give to the other lab group, also include the UC and College property tags, when applicable. Make sure the transfer information is complete with the new lab location and group name.

DO NOT dismantle equipment items that are tagged with the UC or College barcode numbers for parts (see the procedures for equipment disposal/salvage). DO NOT dump items in the disposal area, your lab/office are responsible for these items if they are not disposed of properly.

**Lab/Office responsibility for transferring to another lab:** Give the completed Equipment Disposal/Transfer Request form to Carl Lamey, Shipping/Receiving Supervisor. Complete your transfer of equipment to the other lab group and obtain their signature as receiving the items. The receiving lab will need to make sure all items listed are what are received as is as the lab will become the responsible party for such equipment.

Equipment Management Responsibility: Carl Lamey, Equipment Contact, will update BETS (Berkeley Equipment Tracking System) and verify that the transfer was completed accurately.

**EQUIPMENT DISPOSAL AND/OR TRANSFER REQUEST**

Date: \_\_\_\_\_

**for Both Disposal/Salvage and Transfers:**

Requestor: \_\_\_\_\_  
(Name and phone#)

PI's Release  
Authorization: \_\_\_\_\_  
(Signature and Date)

Lab Group/Office: \_\_\_\_\_  
(PI's Name and Lab)

Location: \_\_\_\_\_

**For Transfers only:**  
**PI's Receiving**  
Authorization: \_\_\_\_\_  
(Signature and Date)

**ITEMS TO BE REMOVED/TRANSFERRED (please include UC and/or College property number):**

Equipment Description	Property Tag #:	Reason for Disposal/ Transferred to (include new location):
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____

**FOR DISPOSAL/SALVAGE ONLY:**

Lab/Office Pickup Verified by:  
Verification:  
X \_\_\_\_\_  
(Name and Date)

Equip. Management. Verification:  
X \_\_\_\_\_  
(Name and Date)

Excess & Salvage  
X \_\_\_\_\_  
(Name and Date)

## H. Trash

### 1. Common Trash

"Common trash" consists of such things as non-recyclable paper, plastics, packing containers or materials, clean glassware, lunch bags or food stuffs, unbroken beverage containers, and wood products that are small enough to fit into dumpsters.

Common trash from offices where hazardous materials are very uncommon is collected in waste baskets which are emptied and carried to the Trash Room by custodial staff working at night. It is the responsibility of the office supervisor to know if any hazardous materials are used in the office (such as toner cartridges or batteries) and to ensure that office personnel are appropriately trained and that all such material is properly disposed of and not mixed with the common trash.

Common trash in laboratories, storerooms, or shops where hazardous materials are extensively used is kept in separate trash containers. The common trash is collected in waste baskets or other containers appropriate for trash collection. It is the responsibility of all persons using the waste container to make sure that hazardous material (chemicals or chemically contaminated material) or any broken glassware (clean or contaminated) does not enter the common trash receptacle. It is the supervisor's responsibility to ensure that laboratory or shop staff is appropriately trained and that materials are properly disposed of.

### 2. Special Trash

"Special" trash includes such office waste as toner cartridges, cleaning chemicals, non-water base "white-out", fluorescent light bulbs and batteries.

#### a. Toner Cartridges

Every effort should be made to recycle toner cartridges from copiers and laser printers. Some vendors provide a postage-paid container for returning used cartridges to them. This feature should be taken into account when selecting cartridges. For info please call Campus recycling and refuse services (3-4612).

#### b. Cleaning Chemicals, "White-out" and Batteries

Consumer product cleaning materials can go down the drains. All other cleaning chemicals are to be disposed of as described in the Health and Safety Program Manual. Water-base "white-out" can be disposed of as common trash; however, any previously acquired non-water base "white-out" should be disposed of as Chemically Contaminated Material. Batteries should be disposed as universal waste with collection points in Chem. Store room 774 Tan Hall or 317 Lewis Hall. For disposal info call College EHS&S staff (3-0648).

c. Non Hazardous Chemicals

Non hazardous chemicals or material contaminated with such chemicals can be disposed of as trash if they are solid and packed properly. Contact the College Health and Safety staff for consultation.

d. Broken light bulbs and fluorescent lights are covered under the universal waste disposal program. Contact the EHS&S Program (3-0526) for assistance.

3. College Trash Room, Room B90 Hildebrand

In order to comply with regulations regarding the disposal of hazardous materials, access to the College Trash Room is controlled and the following rules are posted on the trash room door and must be adhered to:

**Only common trash (no chemicals or chemically contaminated material) is to be disposed of in the Trash Room.**

Cardboard boxes are to be flattened before being placed in the dumpsters or placed in the Trash Room outside the dumpsters.

Large items must be broken or compacted to minimize the amount of dumpster space used.

Contact Building Management Unit (3-6060) or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu) if you would like assistance regarding particular trash problems (e.g. if you have material to dispose of that is in too large a quantity for the custodial staff to handle).

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## SERVICES AND SHOPS

### I. SERVICES

- A. Administrative and Business Services 410 Latimer Hall  
**Suzanne Sutton**, Assistant Dean for Administration and Finance, Ext. 3-2887

See also:

1. Financial Services  
See **Item "M"** of this section for unit details.
2. Human Resources  
See **Item "P"** of this section for unit details.
3. Purchasing  
See **Item "BB"** of this section for unit details.

- B. Analytical Facility Services  
**Matt Francis**, Executive Associate Dean of the College, ext. 3-9915

See also:

1. Mass Spectrometry & Micro analytical Services, **Item "S"** of this section.
2. NMR Facility, **Item "U"** of this section.
3. X-Ray Diffractometer (CHEXRAY), **Item "JJ"** of this section.

- C. Building Operations 119 Gilman Hall  
Inna Massen, Facilities Manager, Ext. 3-4220  
E-Mail: [massen@berkeley.edu](mailto:massen@berkeley.edu)  
Alexei Anderson, Assistant Facilities Manager  
Igor Kligman, Assistant Facilities Manager

#### Routine Maintenance

For routine maintenance problems call **3-6060** or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu). If repairs are not taken care of in an acceptable period of time, Building management personnel will conduct a status check with the Campus Physical Plant or the appropriate repair persons. If problems persist, the College Facilities Manager will work with Campus Physical Plant supervisory personnel to expedite repairs.

Due to extremely limited Physical Plant personnel, some expected turn-around times for repairs are:

- Light changing without electrical problem – 15-30 days;
- Light changing with electrical problem - 1-2 days;
- Plumbing problems resulting in possible damage - 1 day;
- Plumbing problem with little or no expected damage - 2 weeks;
- Ventilation problems (fume hoods down) – same day response;
- Cold room or warm room temperature problems - immediate same day response;
- Door or lock problems, security or entry problem - same day response;
- Door or lock problems, no security or entry problem - 2-3 weeks;
- Steam/heating/hot water problems – 2+ weeks, unless critical.

If you have called in a repair and have not received the above turn-around, call the Building Management Unit (3-6060).

#### College Corridors

**By State Fire Marshal regulation, there is to be no storage of materials in corridors. Any items left in the corridor must be removed the same day unless and any need to keep an item in the corridor longer than a day should be discussed with Building Management. Any items left in corridors will be picked up for disposal on a routine basis.**

#### Custodial Services

Inna Massen (3-4220) is responsible for custodial services coordination in the College. However, routine requests (mopping, special cleaning, etc.) should be called 3-6060 or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu) for dispatching. Problems with custodial services that are beyond routine requests should be discussed with Inna Massen.

#### Recycling

Mixed paper recycling is occurring in the College. Small blue recycling bins are available for offices and other areas where there is no possibility of chemical contamination. Contact Facilities Manager Massen or her staff at 3-6060 for a container. Bins for newspapers and for aluminum cans are located in the north plaza area near Tan and the B-level outside Latimer. The College of Chemistry machine shop recycles scrap metal. Metal may be brought to Rm. B4 Latimer Hall and placed in the appropriate scrap metal drum.

#### D. Chemical Reuse Facility

780 Tan Hall

Michael Kumpf, supervisor, Ext. 3-0648, E-Mail: [kumpf@berkeley.edu](mailto:kumpf@berkeley.edu)

Emery Wilson, chemical disposal manager, Ext. 2-2630: E-Mail: [emery@cchem.berkeley.edu](mailto:emery@cchem.berkeley.edu)

Print your request with your name and lab room number from the reuse website and drop in folder outside 780 Tan Hall. Orders will be delivered within 24-48 hours.

This is the first place to look when you need a chemical. The Reuse Facility is the College's chemical redistribution center and houses more than 17,000 previously owned chemicals, many are brand new. These are available at no charge by placing a request at the order desk in the 780 Tan offices. The complete Reuse chemical inventory, updated daily, can be searched via the network around the clock. Stop by the Facility to obtain simple searching instructions. The Reuse inventory database can be searched by chemical name or CAS number. All College researchers are invited to call to contribute to the Facility usable COMMERCIAL chemicals that they don't foresee using in the next three months.

#### E. Computing - Information Systems

B36A Hildebrand Hal

Johnathon Kogelman Ext. 3-3533, Email: [jpkogelman@berkeley.edu](mailto:jpkogelman@berkeley.edu), BG12 Giauque Hall.

This unit provides services associated with information technology for the College. Services include initial phone and network trouble shooting, desktop support for Windows & Mac OS X operating systems, and IT security incident handling. For more information visit:

<http://chemistry.berkeley.edu/it/> or email: [cocit@berkeley.edu](mailto:cocit@berkeley.edu)

For computer desktop support and help with network setting, call 2-4838 or email to [COCIT@berkeley.edu](mailto:COCIT@berkeley.edu) .

#### F. College Web Site



Leigh Moyer Ext. 2-2578, Email: [leighm@berkeley.edu](mailto:leighm@berkeley.edu),

Copy machines are located as follows:

1. 201 Gilman Hall - (Chemical & Biomolecular Engineering receptionist, in charge, Ext. 2-2291). These units are card-key controlled. This machine is for departmental, College, or research grant use on a recharge basis. The cost of copies is 5.5 cents/page. (We ask that library books not be taken to 201 Gilman for copying).
2. 450 Latimer Hall - One Xerox Copier (Sean Yarbrough, in charge, Ext. 2-5608). This machine is for departmental, College, or research grant use on a recharge basis. The cost of copies on the machines is 5.5 cents/page. (We ask that library books not be brought to these machines for copying.) Both machines are simple to operate and can be unjammed by following the instructions attached to the machine. Both have enlargement and reduction capabilities.
3. Library Main Floor - (Librarian in charge).

H. Custodial Services 119 Gilman Hall  
See description under I.C., Building Operations above.

I. College Corridors 119 Gilman Hall  
See description under I.C., Building Operations above.

J. Conference Rooms 410 Latimer Hall  
Doris Kaeo, [dkaeo@berkeley.edu](mailto:dkaeo@berkeley.edu) Ext. 2-5060

Rooms may be reserved for meetings throughout the College. To reserve a room, contact Doris Kaeo, via e-mail: [dkaeo@berkeley.edu](mailto:dkaeo@berkeley.edu).

K. Electronic Mail (E-Mail) BG15 Giauque Hall  
Johnathon Kogelman, in charge, IT Director,  
Ext. 2-4838, E-Mail: [COCIT@berkeley.edu](mailto:COCIT@berkeley.edu)

Email accounts can be created on-line via the <https://calmail.berkeley.edu> site, click the *Create Account* link on the left hand side of the page and follow the on-screen instructions. This will require a CalNet ID and passphrase. If you need a departmental account, please send an email to [support@cchem.berkeley.edu](mailto:support@cchem.berkeley.edu); include the unit or group, the purpose, and the requested name of the account.

L. Engineering Support 444 Latimer Hall  
Alexander M. Shtromberg, Assistant Dean for Engineering, Facilities and Capital Projects,  
Ext. 2-2345  
Email: [shtrom@berkeley.edu](mailto:shtrom@berkeley.edu)

Alex Shtromberg directs engineering support services to technical and research personnel in the design and construction of research, teaching, and building-related equipment; in the liquid air operation and in renovation of laboratories, offices and classrooms.

M. Financial Services 410 Latimer Hall  
Suzanne Sutton - Assistant Dean for Administration and Finance, Ext. 3-2887

Financial Services provides accounting services and financial reporting for:

- Federal and private contract and grants, gifts and endowments
- State and College funds
- Accounts Payable, Accounts Receivable, and recharge billing
- Proposal and Pre-award contract and grant administration
- Business Contract for outside customers

N. Furniture 119 Gilman Hall  
 Contact the Building Management office at 3-6060 or [chem\\_request@berkeley.edu](mailto:chem_request@berkeley.edu)  
 Requests for addition or removal of furniture should be made to the same entity.  
 While the amount of furniture available is limited, every attempt will be made to fill your needs.

O. Environment, Health, Safety & Security program, EHS&S. 317 Lewis Hall  
 Michael Kumpf, Associate Director of the College of Chemistry EHS&S program  
 Director of the College Emergency Response Team  
 E-Mail: [kumpf@berkeley.edu](mailto:kumpf@berkeley.edu) ; Ext. 3-0648

Chemical Recycling and/or Disposal  
 Chemical Reuse Facility, Non-Recyclable Chemical Disposal (liquid chemicals),  
 Contact Emery Wilson (2-2630).  
 Contaminated Lab Debris Disposal (dry chemicals, mercury & chemical sharps),  
 Contact (Vacant) (3-0526).

P. Human Resources 406 Latimer Hall  
 Kenya Raymond – HR Partner 664-9613 [KenyaRaymond@berkeley.edu](mailto:KenyaRaymond@berkeley.edu)

Human Resources provides personnel and payroll services for staff and non-academic senate members and benefits counseling (e.g., health, dental, vision, COBRA, savings plans, disability, workers' compensation) for all College personnel, as well as recruitment and payroll services for staff.

Q. Library, College of Chemistry 100 Hildebrand Hall  
 Brian Quigley, Chemistry Librarian, Ext. 2-0634  
 Agnes Concepcion, Operations Manager, Ext. 3-4477  
 URL is <http://www.lib.berkeley.edu/CHEM>  
 The Chemistry Library is the branch of the UC Berkeley Library that collects books, journals, and reference material about chemistry and chemical engineering. Reference service is available and online literature searching is offered to College of Chemistry faculty on a cost recovery basis. Many of the library's resources such as recent journals, journal article indexes, and handbooks are available electronically. Training on how to access and use these materials as well as scheduling tours of the library can be arranged by calling the Chemistry Librarian.

R. Liquid Air Operation, BG-09 Giauque Hall  
 Philip Simon, Ext. 2-4165, E-Mail: [pfsimon@berkeley.edu](mailto:pfsimon@berkeley.edu)

S. Mass Spectrometry and Micro analytical Services Stanley Hall  
 Dr. Ulla N. Andersen, Assistant Director, Ext. 2-0701 E-Mail: [norklit@berkeley.edu](mailto:norklit@berkeley.edu)

This facility performs elemental analysis and a variety of mass spectrometric analyses. Ionization techniques available include fast atom bombardment, electron impact and electrospray ionization. All techniques can provide low and high resolution data. A student operated GC-MS is available between 9 a.m. and 5 p.m.

- T. Molecular Graphics Facility 175 Tan Hall  
Dr. Kathleen Durkin, Manager, Ext. 2-6719, E-Mail: [kdurkin@cchem.berkeley.edu](mailto:kdurkin@cchem.berkeley.edu)

The Molecular Graphics Facility provides high-performance scientific visualization hardware and software for research and education. The Facility houses graphical workstations from Silicon Graphics, DEC, and IBM. There is a huge assortment of software for these systems including AVS, Cerius2, Macromodel, InsightII, Jaguar, Gaussian, Gamess, Midas, Spartan, Mopac2000, MM3, VMD, and more. There are also color printers, color scanners, a slide maker, two power Mac's and video recording equipment.

Access to the Facility is generally based on an annual subscription fee, and currently serves over 35 research groups. However, access to the color printers (for both prints and transparencies) is available to everyone, with charges on a per print basis. See <http://glab.cchem.berkeley.edu> for the most current information.

- U. NMR Facility D11 Latimer Hall  
Chris Canlas Director of NMR Engineering, Ext. 2-6407  
E-mail: [nmrlab@purcell.cchem.berkeley.edu](mailto:nmrlab@purcell.cchem.berkeley.edu)  
URL: <http://calmarc3.cchem.berkeley.edu>

The Facility currently has 6 NMR spectrometers from 300 to 600 MHz. All instruments are available 24 hours a day, year-round for checked-out users. Facility staff and designated group operators provide training in basic instrument operation and facility safety regulations. Every spring semester we offer Chem 265, a 5-week NMR course (lecture and lab) which focuses on NMR theory and a survey of its application to chemical research. Various training courses are given throughout the year. Persons interested in training courses should visit the facility website for application notes and procedures. Dr. Chris Canlas is available for consultation regarding NMR experiments, please e-mail to [nmrlab@purcell.cchem.berkeley.edu](mailto:nmrlab@purcell.cchem.berkeley.edu)

- V. Parking  
Faculty, staff, and visitors may obtain general information and permit applications for campus parking by directly contacting the Campus Parking and Transportation Office at 2-4283.

- W. Parking, Visitor 410 Latimer Hall  
Doris Kaeo, [dkaeo@berkeley.edu](mailto:dkaeo@berkeley.edu) Front Desk, Ext. 2-5060

Visitor parking may be arranged for College visitors. All arrangements must be made through Carol. E-mail requests are encouraged ([carolmah@cchem.berkeley.edu](mailto:carolmah@cchem.berkeley.edu)) unless the request is for the same day. The hosting faculty or staff name as well as the visitor's first and last names are needed. If the visitor will receive complimentary parking, the host should provide a cost center number to be charged.

X. Personnel Services (Academic)

Dean's Office, GERALYN UNTERBERG, [gunterberg@berkeley.edu](mailto:gunterberg@berkeley.edu) Ext. 3-0472 420CLatimer Hall  
 Dept. of Chemistry, HOMA KAMSI, Ext. 3-0958 419 Latimer Hall  
 Dept. of Chemical Engineering, KIM EASTMAN Ext. 2-0979 201 Gilman Hall

AA. Personnel/Payroll Services (Student and Casual Employment) 410 Latimer Hall

April May - Hr/Payroll Specialist Ext. 3-0561 [aprilmay@berkeley.edu](mailto:aprilmay@berkeley.edu)  
 Isabel Rogne- Hr/Payroll Specialist Ext, 3-9309 [isabelr@berkeley.edu](mailto:isabelr@berkeley.edu)  
 Grayson Converse - Academic HR Analyst Ext. 2-8354 [graycon@berkeley.edu](mailto:graycon@berkeley.edu)  
 Iris Acosta - Hr/Payroll Specialist Ext. 2-3322 [irisoacosta@berkeley.edu](mailto:irisoacosta@berkeley.edu)  
 Kenya Raymond – HR/Payroll Specialist Ext. 3-1095 [kenyaraymond@berkeley.edu](mailto:kenyaraymond@berkeley.edu)

(Casual staff and student employment (e.g. hiring forms preparation and time & payroll reporting)).

BB.Purchasing 410 Latimer Hall

Charles Chen- Ext. 2-8161 and Tsering Youdon – Ext. 2-1126 - purchasing officers.  
 Supplies and equipment, if not in stock in the storeroom, can be purchased upon approval of a research director or supervisor. After checking with the 791 Tan stockroom staff to see that the material is not a stockroom item, fill out a request via BearBuy online purchasing system. The requests should include a precise description of the desired material, vendor, catalog number; date needed, cost center number and must be approved by the research director.

Each year, the University executes statewide agreements with various vendors to provide specific materials. These may be reviewed online at the Procurement & Business Contracts Home Page at <http://businessservices.berkeley.edu/procurement/sourcing>. If your requirements are unique so that material from the University-designated vendor is unsuitable, a concise but complete statement of the circumstances that makes this so must be included on the order slip, together with sources of suitable material.

CC. Receiving and Shipping B84A Hildebrand Hall

Carl Lamey, Supervisor, Exts. 2-5608 and 2-3469.

To provide inventory and invoicing control, all purchases are delivered to B84A Hildebrand. Likewise, requests to have material shipped from the College should go there.

Expediting. Once an order has been placed, orders that are not delivered within a reasonable time should be expedited through the College Receiving Office, Rm. B84A Hildebrand Hall. Orders are expedited only on request. Please have the Purchase Order number of the order in question when you request expediting.

DD. Recycling

See description under I.C., Building Operations above.

EE. Renovations

Any alterations, modifications or additions to building spaces, systems and equipment shall be approved by the College Facilities Committee. This Committee includes: Douglas Clark, Executive Associate Dean Matt Francis, Assistant Dean for Facilities, Engineering and Capital Projects, Alexander M. Shtromberg, Asst. Dean Administration & Finance, Suzanne Sutton, College Health & Safety Associate Director Mike Kumpf, Facilities Manager Inna Massen, Manager of College Shops Norman Tom. Regardless of the source of funding, renovation work shall not be performed without prior committee approval. Requests for a feasibility study and a cost estimate shall be submitted to Alex Shtromberg via e-mail (shtrom@berkeley.edu) or in writing.

FF. Student Assistance Pool

Assistant Building Manager Alexei Anderson, in charge, Ext. 2-5231, E-Mail: [alexeianderson@berkeley.edu](mailto:alexeianderson@berkeley.edu)

Small pool of student helpers are available for special jobs of short duration. If you need student assistance for a quick job, contact Alexei.

GG. Telephones

Johnathon Kogelman Ext. 3-3533, Email: [jpkogelman@berkeley.edu](mailto:jpkogelman@berkeley.edu), BG-12 Giauque Hall

Telephones: Installation, Modifications, and Deletions:

Information Systems acts as a conduit between the College and Campus' IS&T unit, we can assist with what, how, and when to make changes to the existing telecommunication system. Submit requests to [support@cchem.berkeley.edu](mailto:support@cchem.berkeley.edu) and include important information such as building, room number(s), group/unit, phone number(s), type of changes, and a valid chart string. Please keep in mind that most requests take two weeks to process, and some requests make take longer. Information systems also facilitate trouble tickets for the telecommunication system; please send an email to [support@cchem.berkeley](mailto:support@cchem.berkeley)

Telephones: Use and Repairs please send an email to [support@cchem.berkeley](mailto:support@cchem.berkeley)

HH. Vehicles

B84A Hildebrand Hall

The use of the college vehicles has to be approved by Assistant Dean of Finance & Administration Ext. 3-2887.

Full-size pickup truck: Reservations can be made in B84A Hildebrand (Receiving). The location for check-in and check-out is also Room B84A Hildebrand.

Check-in and check-out for this vehicle is between 8:00 AM and 5:00 PM and the following policies apply:

- You must have a College of Chemistry I.D. and a valid driver's license.
- This vehicle is restricted to University business.

Short-term Rentals: Rental vehicles are available from San Ramon Carriage Co. (1990 Oxford Street). For rental of vehicles, come to B84A Hildebrand. To reserve vehicles, phone San Ramon Carriage Co. at 845-1306.

## II. Workers' Compensation

410 Latimer Hall

Doris Kaeo, Ext. 2-5060, coordinates the Workers' Compensation reporting process for the College of Chemistry. Injuries should be reported immediately to begin the Workers' Compensation process.

The following people coordinate the Workers' Compensation Benefits Program for the College of Chemistry:

Isabel Rogne - 2-9309

Refer to page 22 for more information on Workers' Compensation.

## JJ. X-Ray Diffractometer (CHEXRAY)

29 & 32 Lewis Hall

Antonio DiPasquale, in charge, Ext. 2-8444, Fax 2-9295

CHEXRAY has a Bruker SMART CCD area-detector X-ray diffractometer and various X-ray diffraction cameras. Data for structure analysis can be taken and structures solved on the dedicated computers and terminals, both as a service and by trained users. Training is available on an individual basis and an applied X-ray crystallography course, Chemistry 208, is given yearly. See Antonio DiPasquale for details and rates.

The website is located at <http://xray.cchem.berkeley.edu>.

## II. SHOPS

The College maintains well-equipped shop facilities staffed with experienced technical personnel to support experimental research and instruction. The support provides consultation, repairs, and fabrication of experimental and teaching equipment. The Shops perform work on a recharge basis and require the research director's authorization prior to beginning a job. Fill out and submit a Shop Work Request form to have work done by a shop. Consult with the shop supervisor or designated person when requesting work to help ensure quality service and customer satisfaction.

### A. Shops and Research Support Services

B4 Latimer Hall

Norman Tom, manager, Ext. 2-3166, E-Mail: [norman@cchem.berkeley.edu](mailto:norman@cchem.berkeley.edu)

#### 1. Electronics Shop

B44 Hildebrand Hall

Clif Marshall, acting supervisor Ext. 2-4594, E-Mail: [clif@cchem.berkeley.edu](mailto:clif@cchem.berkeley.edu)

Design, fabrication and repair of electronic equipment. The Electronics Shop teaches an informal course in electronics for research scientists that are recommended to all graduate students. The Electronics Shop maintains a storeroom for electronic parts.

#### 2. Glass Shop

B63 Hildebrand Hall

James Breen, supervisor, Ext. 2-3454, Email: [jimbreen@berkeley.edu](mailto:jimbreen@berkeley.edu)

The Glass Shop performs all types of scientific glassblowing including design, fabrication, repair, and custom modifications of experimental equipment. Customers may purchase glass tubing and fittings here.

3. Machine Shop B4 Latimer Hall  
Eric Granlund, supervisor, Ext. 2-4486, E-Mail: [eric@cchem.berkeley.edu](mailto:eric@cchem.berkeley.edu)

The Machine Shop offers a wide range of machining and welding services. The shop fabricates and repairs research instruments, equipment, and components. The Machine Shop, in conjunction with Research Support Services, moves and installs laser tables and other large pieces of equipment. Customers may purchase small quantities of screws, metal bar plates, or shapes here. Larger quantities of materials should be ordered through College Purchasing.

4. Research Support Services – Electrical Shop B17 Latimer Hall  
Clif Marshall, supervisor, Ext. 2-4594, E-Mail: [clif@cchem.berkeley.edu](mailto:clif@cchem.berkeley.edu)

The Electrical Shop installs electrical power and lighting, voice and data cables, in addition to repairing electro-mechanical equipment and instruments.

5. Research Support Services - Pump Repair B4C Latimer Hall  
Clif Marshall, supervisor, Ext. 2-4594, E-Mail: [clif@cchem.berkeley.edu](mailto:clif@cchem.berkeley.edu)

The Pump Repair shop maintains and repairs equipment and appliances such as vacuum pumps, refrigerators, and temperature baths. Customers may purchase reconditioned mechanical pumps here.

5. Research Support Services – Carpentry/Mechanical Shop (Wood Shop) B18 Latimer Hall  
Mike Brateng, supervisor, Ext. 3-2079, E-Mail: [mbrateng@berkeley.edu](mailto:mbrateng@berkeley.edu)

The Wood Shop provides carpentry, cabinet making, wood working, painting, and plumbing, unistrut, and sheet metal fabrication and repair services. The Wood Shop, in conjunction with the Machine Shop, moves and installs laser tables and other large pieces of equipment. The Wood Shop coordinates with the other units of the Research Support Services group to install and set up lab furnishings and equipment such as fume hoods, lab benches and glove boxes.

7. Student Shop B4A Latimer Hall  
Phil Simon, supervisor, Ext. 2-2057, Email: [pfsimon@berkeley.edu](mailto:pfsimon@berkeley.edu)

The Student Shop provides equipment and facilities for graduate student use. Shop access requires successful completion of the Student Shop class, a short course in the safe and proper use of the machine tools and equipment. Tools may be borrowed for short term use with the approval of the Student Shop supervisor.

### III. CHEMISTRY STOREROOM

Suzanne Sutton, Assistant Dean for Administration and Finance, Ext. 3-2887

Two valuable adjuncts to a research laboratory are a well stocked storeroom and effective access to it. The College of Chemistry endeavors to stock materials needed for undergraduate instruction and



for graduate student research to that extent which represents an acceptable balance between cost and convenience. The College controls access to these storerooms to the extent necessary to obtain satisfactory use records and to maintain inventory control.

The transactions are entered by the user into a magnetic card controller, charging a cost center number linked to the user's Cal 1 card. Instructions for entering the data are noted on the controller. College cards are required for admission to the 791 Tan storerooms. Undergraduate students and non-College of Chemistry personnel are not allowed access to the storeroom when it is closed. If the door is locked during office hours (M-F; 8-12 and 1-5), please knock or see the staff member in 782 Tan. For information on using and obtaining a Cal 1 card for use in the College, please see VI.B.4 on page 21.

A. Chemicals, Glassware, Lab and Office Supplies 791 Tan Hall  
Sean Yarbrough, Ext. 2-5608 or 2-0177, Email: [sgriff@berkeley.edu](mailto:sgriff@berkeley.edu)

Generally used by faculty and graduate students on a recharge basis only. Electrical, optical, and physical equipment, components, tools, and office supplies (graph paper, etc.).

#### IV. INSTRUCTIONAL SUPPORT OPERATIONS

A. Chemistry Instructional Support Operations 211 Latimer Hall  
Robert H. Lamoreaux, Manager, 211 Latimer Hall, Ext. 2-3448, Email: [lamoreau@cchem.berkeley.edu](mailto:lamoreau@cchem.berkeley.edu)

1. Lower Division Labs 4A, B; 5 220 Latimer Hall  
Dante Valdez Jr., supervisor, Ext. 2-6981

2. General Chemistry 1A, B 220 Latimer Hall  
Karen Chan, supervisor, Ext. 2-6981

3. Organic Chemistry 3A, B; 112 A, B; 115 309 Latimer Hall  
Robert Steiner, administration supervisor, Ext. 2-6599  
Storeroom, Ext.2-6980 315 Latimer Hall

4. Upper Division Labs 105; 108; 125; 144 306 Latimer Hall  
Dante Valdez Jr., supervisor, Ext. 2-6981

5. Pimentel Hall Demonstrations Lab 17 Pimentel Hall  
Karen Chan, supervisor, Ext. 2-6687

B. Chemical Engineering Instructional Support Operations 118 Gilman Hall  
Esayas Kelkile, Coordinator, Ext. 3-5478

#### V. MISCELLANEOUS SUPPLIES

A. Cylinder Gases  
Stock gases (argon, hydrogen, compressed air, nitrogen, oxygen, acetylene) are available from a card-key controlled cage in B84 Hildebrand. Cylinder gases other than helium and stock gases should be ordered from the College Purchasing Office, Room 410 Latimer Hall. Pick up and return



cylinders at B84A Hildebrand. (Refer to the College Health and Safety Program manual for safety requirements.) If a cylinder is not in use, it should be returned to Receiving.

B. Dry Ice

A backup supply of dry ice is available in B84 Hildebrand on a recharge basis.

C. Gaseous Helium

Gaseous helium cylinders for College of Chemistry accounts are available from a card-key controlled cage in the Liquid Air Plant cylinder station located on the B-Level of Latimer Hall at the Giauque freight elevator. (Contact Liquid Air personnel at Ext. 2-4165) (Refer to the College Health and Safety Program manual for safety requirements.)

D. Ice

Ice machines are located on most floors of Latimer, Hildebrand and Tan Halls. Ice machine malfunctions should be reported to the College Building Management Unit at 3-6060.

E. Liquid Helium

Liquid helium is available from the Liquid Air Plant, room BG9 Giauque Hall, in 60, 100, 250 and 500-liter dewars (vacuum-jacketed helium containers) by request. Customers need to request helium 48 hours in advance. Contact Liquid Air personnel at Ext. 2-4165. (Refer to the College Health and Safety Program manual for safety requirements.)

F. Liquid Nitrogen

Liquid nitrogen is available in BG10A Giauque Hall, located on the B-level between the Tan and Giauque freight elevators. Coded Cal I.D. Cards are required to obtain liquid nitrogen from this station. (Contact Liquid Air personnel at Ext. 2-4165) (Refer to the College Health and Safety Program manual for safety requirements.)

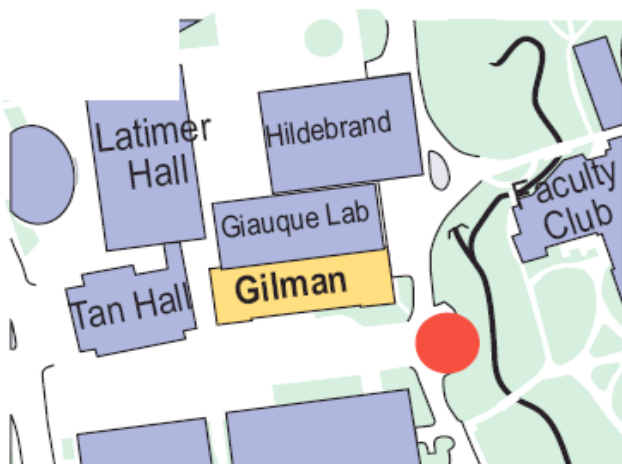
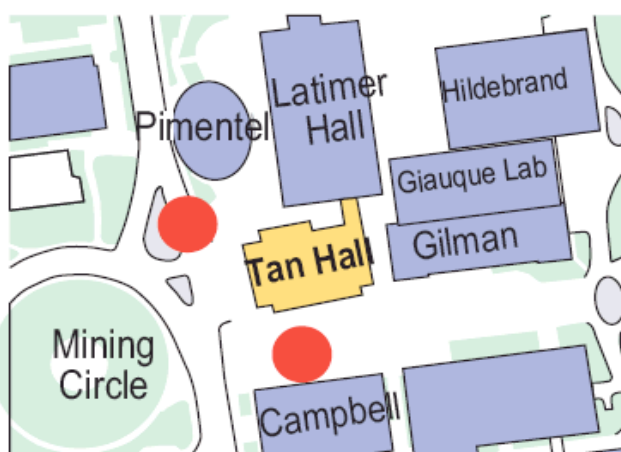
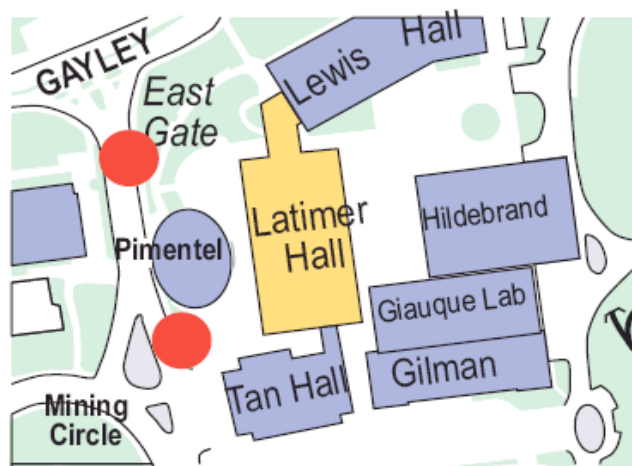
**APPENDICES**  
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**APPENDIX I**

# College of Chemistry EAA's



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## **APPENDIX II**

### **CAMPUS ALERTING & WARNING SYSTEM**

THE ALERTING AND WARNING SYSTEM (AWS) IS A NETWORK OF SIRENS AND COMMUNICATION LINKS THAT WARN AND INFORM THE CAMPUS COMMUNITY OF WHAT TO DO IN AN EMERGENCY OR DISASTER. THIS INCLUDES DANGERS RESULTING FROM NATURAL OR TECHNICAL HAZARDS SUCH AS CHEMICAL SPILLS, FLOODING, FIRES, STORMS, POWER OUTAGES, TRANSPORTATION INCIDENTS, AND OTHER PUBLIC SAFETY INCIDENTS.

The campus has four hazard warning sirens strategically located to cover the main campus and adjacent campus facilities. The University of California Police Department activates these sirens. Depending on the incident, sirens and/or public address announcements may be transmitted over this system. **These sirens are tested at 12:00 noon on the first Wednesday of every month.**

#### **WHAT DO YOU DO WHEN YOU HEAR A WARNING SIREN OUTSIDE OF THE SCHEDULED TEST?**

\* **SHELTER:** Go inside your office or residence, a nearby building, or your car and shelter inside to avoid exposure. If driving a car, safely pull over to the side of the road, turn off the engine and stay tuned.

\* **SHUT:** Shut all doors and windows. Building Operations Managers should turn off ventilation systems, if feasible. (This is not feasible in the College of Chemistry facilities.)

\* **LISTEN:** Access one of the following sites to obtain campus emergency information, such as disaster type, evacuation routes, shelter and aid locations, special instructions, etc.

\* **Emergency Information Line: 1-800-705-9998.** This out-of-area number allows recorded messages to be accessed by any standard, cell or pay phone, free of toll charges. Information about the emergency is recorded as an outgoing message, and is updated as the situation evolves.

\* **Web site: <http://emergency.berkeley.edu>.** This off-site alternate emergency Web presence is reachable anytime, from anywhere. Like the 800 service, local area power failures or other crisis conditions will not affect the operation of this web site.

\* **Radio station: KALX 90.7 FM.** The campus radio station, broadcasting at 500 watts, will be utilized to disseminate emergency information during critical incidents and disasters. KALX normally broadcasts 24 hours every day with live programming. KCBS (740 AM), KGO (810 AM), and KNBR (680 AM) also carry Bay Area emergency information.

**DO NOT CALL 911 IF YOU HEAR A WARNING SIREN, ONLY CALL 911 IF YOU HAVE A LIFE-THREATENING EMERGENCY.**

Since disasters are unpredictable, one must be prepared for an emergency whether at home, at work, at school, or in the car. Think about places where you spend your time and how you can best be prepared for an emergency at any given location and time. It is wise to keep a battery operated AM/FM radio and extra sets of batteries at home, work, and in your car.

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## APPENDIX III Workers' Compensation Form

University of California, Berkeley  
Workers' Compensation

### EMPLOYER'S REPORT OF INCIDENT (for reporting work-related injuries/illnesses)

Incidents must be reported within 24 hours of knowledge <b>Fax completed form to:</b> <b>Disability Management Services</b> <b>(510) 642-6505</b>	<b>Note:</b> EH&S (510-642-3073) must be notified immediately if any of the following occurs: worker fatality, inpatient hospitalization, loss of any body part (e.g., fingertip), or possible permanent disfigurement
--	--

EMPLOYEE INFORMATION		
Employee's Name (Last Name, First Name):	Employee's Work Phone #: (    )	Employee ID # (9 digits): 01
Job Title:	Department Name:	Department Code:
Supervisor's Name:	Supervisor's Work Phone #: (    )	Supervisor's E-mail Address:

EMPLOYMENT INFORMATION		
Employment Status (Check applicable status at time of injury): <input type="checkbox"/> Full-Time <input type="checkbox"/> Part-Time      % time <input type="checkbox"/> Limited From:                      To:	Employee usually works: 0.00 hrs/day, 0 days/week - 0.00 total hrs/week	Does Employee go on Furlough? <input type="checkbox"/> No <input type="checkbox"/> Yes, Dates of Furlough (mm/dd/yy): From:                      To:
Gross Wages/Salary: \$            per <input type="checkbox"/> month <input type="checkbox"/> hour <input type="checkbox"/> annual	Shift Differential? <input type="checkbox"/> No <input type="checkbox"/> Yes, \$            per hour	Does the employee receive a meal allowance? <input type="checkbox"/> No <input type="checkbox"/> Yes, \$            per meal (how many) per day
Paid full wages for date of incident or last day worked? <input type="checkbox"/> Yes <input type="checkbox"/> No Number of hours of accrued leave (sick leave, etc.) used to pay full wages on this date: hours		Date last worked (mm/dd/yy):
Unable to work for at least one full day after date of incident? <input type="checkbox"/> Yes <input type="checkbox"/> No		Salary being continued? <input type="checkbox"/> Yes <input type="checkbox"/> No
		Date returned to work (mm/dd/yy):

INCIDENT INFORMATION				
Date of Incident:	Time of Incident: <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Time Began Work: <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Time Stopped Work: <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Date Employee Reported Incident:
Location of Incident (street, building, room):				
What was the employee doing just before the incident occurred? Describe activity, tools, equipment, materials, etc.				
What happened? Describe in detail how the incident occurred:				



What part(s) of the body were affected and how:		
What object or substance directly harmed the employee:		
Were there witnesses to this incident? <input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes – If yes, witness name(s) and phone number:		
Was there equipment involved in this incident? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes" what was the equipment?	Did equipment malfunction cause the incident? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes" remove equipment from use, tag it for identification, secure it, and notify EH&S (510-642-3073)	
1. Contributing Conditions	2. Contributing Behaviors	3. Preventive Actions
<input type="checkbox"/> Duties or tasks not clear <input type="checkbox"/> Equipment or tool defect/failure <input type="checkbox"/> Equipment or tool unavailable <input type="checkbox"/> Ergonomic factors <input type="checkbox"/> Lighting/temperature/ventilation <input type="checkbox"/> Procedure lacking or unclear <input type="checkbox"/> Training lacking or incomplete <input type="checkbox"/> Work area set-up/arrangement <input type="checkbox"/> Work area clutter <input type="checkbox"/> Unrecognized hazard: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> Assistive device not used <input type="checkbox"/> Failure to get assistance <input type="checkbox"/> Improper tool/equipment used <input type="checkbox"/> Inattention to task <input type="checkbox"/> Lack of communication <input type="checkbox"/> Procedure not followed <input type="checkbox"/> Protective equipment not worn <input type="checkbox"/> Rushing or hurried <input type="checkbox"/> Safety features of devices bypassed <input type="checkbox"/> Unbalanced/poor body position/motion <input type="checkbox"/> Other: _____	<p style="text-align: center;"><b>Supervisor will:</b></p> <input type="checkbox"/> Develop/revise safety procedures <input type="checkbox"/> Maintain good housekeeping <input type="checkbox"/> Maintain tools/equipment <input type="checkbox"/> Post safety signs <input type="checkbox"/> Perform job hazard analysis <input type="checkbox"/> Perform task safety analysis <input type="checkbox"/> Provide protective equipment <input type="checkbox"/> Remove equipment from use <input type="checkbox"/> Schedule safety training <input type="checkbox"/> Other: See next line below
List any other actions that will be taken or control measures that will be put in place to prevent recurrence:		

<b>MEDICAL CARE</b>
Where was the employee referred for medical care?  <input type="checkbox"/> Occupational Health Clinic (Tang Ctr) <input type="checkbox"/> Urgent Care (Tang Ctr) <input type="checkbox"/> Emergency Room <input type="checkbox"/> Unknown <input type="checkbox"/> Other:

Note: Completing this form is <u>not</u> an admission of University liability	Department Representative Who Completed This Form:	Date:
	E-Mail Address:	Phone Number:
	Campus Mail Address:	Mail Code:

If you have any questions, please contact Disability Management Services at (510) 643-7921.

**APPENDIX IV Volunteer Registration Form**

**Volunteer Register**

This section to be completed by supervisor or research director:

**Department:** \_\_\_\_\_ **Supervisor:** \_\_\_\_\_

**Work Location:** \_\_\_\_\_ **Work Phone:** \_\_\_\_\_

**Period of Service:** \_\_\_\_\_ **To:** \_\_\_\_\_

**Work Schedule:** \_\_\_\_\_

**Brief Description of Duties:** \_\_\_\_\_

**Loyalty Oath Signed:** \_\_\_\_\_ **Patent Agreement Signed:** \_\_\_\_\_  
 (If needed) **Date:** \_\_\_\_\_ (if needed) **Date:** \_\_\_\_\_

\_\_\_\_\_  
**Signature of Dept. Head or Designee**      **Title**      **Date**

This section to be completed by volunteer:

**Name of Volunteer:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Phone:** \_\_\_\_\_  
 \_\_\_\_\_

**Student Status:**       Graduate       Undergraduate       Not Applicable

-----  
 |  
 | If volunteer is a Student:  
 |  
 | 1) Name of student's school: \_\_\_\_\_  
 |  
 | 2) is work performed related to coursework at that school?     Yes     No  
 |  
 |-----

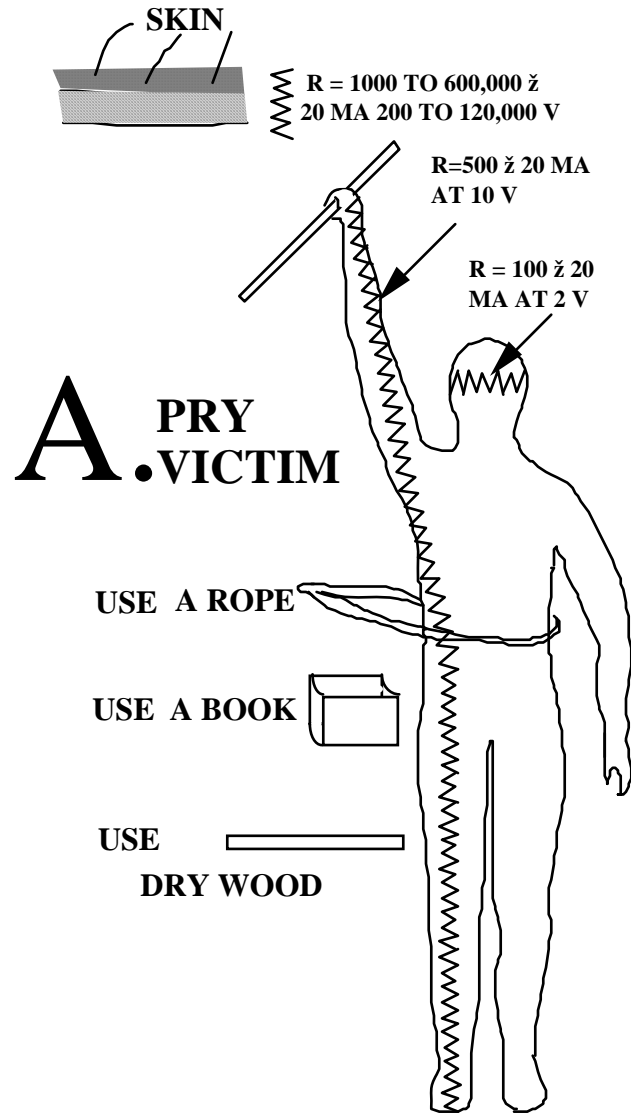
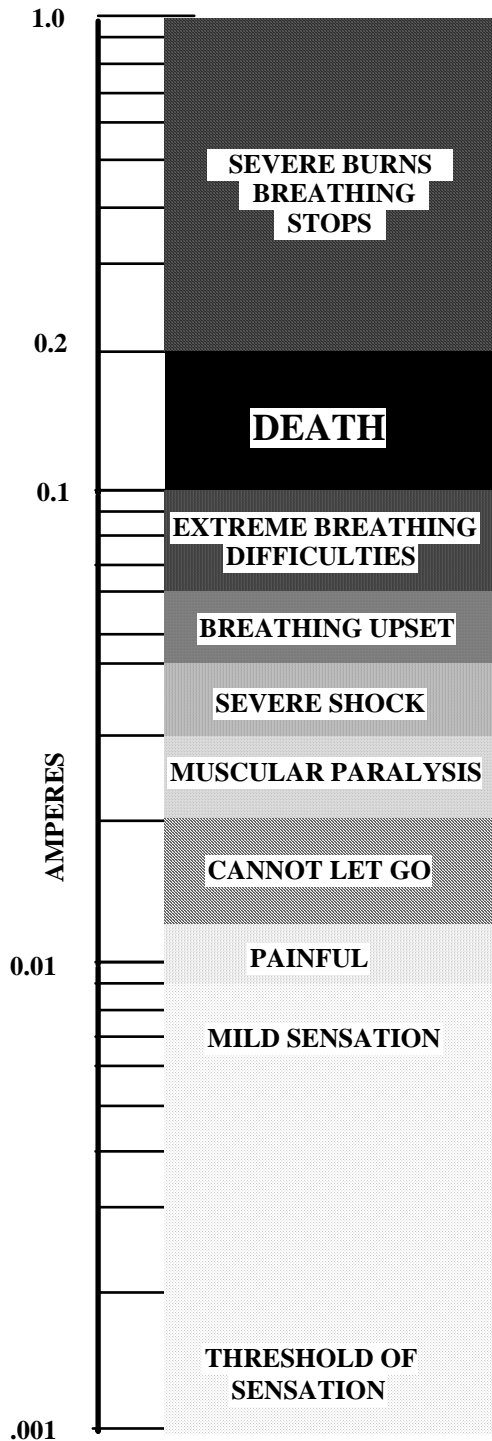
**Volunteer Statement:**

"I understand that the above-described volunteer service will be uncompensated (except For per diem, where applicable). I understand that either I or the University may terminate this relationship at any time without notice. I agree to abide by all rules and regulations of the University."

\_\_\_\_\_  
**Signature of Volunteer**      **Date**

## Appendix V Electric Shocks

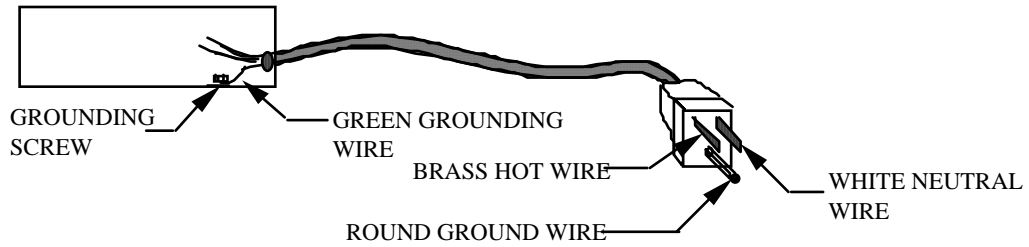
**ELECTRICAL CURRENT IS FATAL:** At .020 amps violent muscular contractions can occur - since flexors are more powerful than extensors the victim tends to grasp the source uncontrollably and **"CANNOT LET GO."**



DEC. 1991 CIC

## Common Sources of Electric Shocks

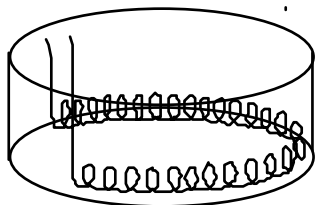
### Ungrounded Equipment



### Frayed Electric Cords



### Exposed Electric Wiring



## **Appendix VI**

### **Safety Glasses**

#### Procurement of Safety Glasses

Approved safety glasses, with either prescription or plain lenses, can be obtained from the School of Optometry. These glasses are fitted to each individual and are available in a number of frame styles. General ANSI Z87.1 safety glasses are available for purchase through the College H & S Program office, 317 Lewis.

Graduate students who have teaching assistant appointments and have not joined a research group will have their glasses purchased by the College. Graduate Students and other members of the College who are not teaching assistants may recharge the cost of their safety glasses with the approval of their research director or supervisor.

Additional information and appointments for fitting of safety glasses may be obtained from the College Purchasing Office (410 Latimer, ext. 2-2110). In all cases, requests for safety glasses must be accompanied by a lens prescription not more than two years old. All individuals must pay for their own eye examinations.

#### Contact Lens Wearers

Currently, College policy allows contact lenses in the laboratory when worn with appropriate ANSI approved safety glasses with side shields or with goggles. However, research has shown that wearing contact lenses in laboratories may result in serious eye injury. Only because further research supported by the Joint Board-Council Committee on Chemical Safety of the American Chemical Society found flaws in the previous study does the College allow contact lenses in laboratory. When wearing contact lenses, great care should be taken and proper eye protection is to be worn at all times.

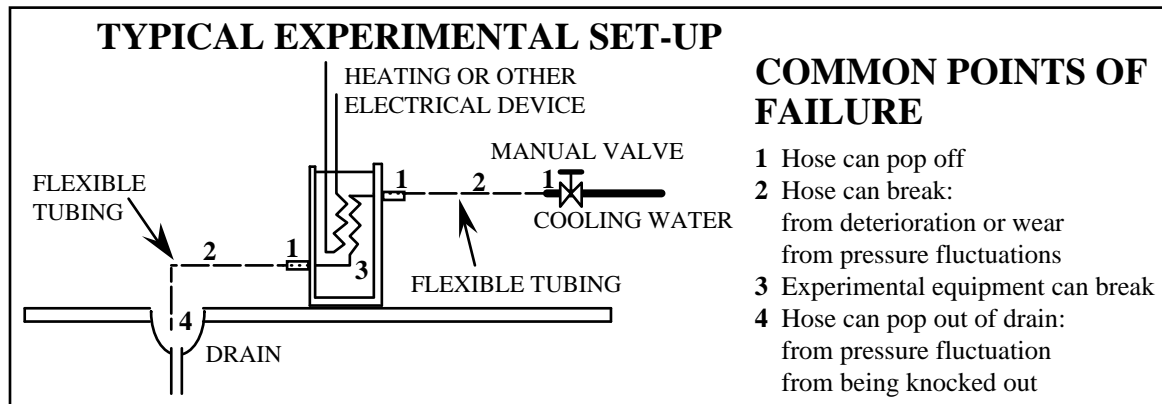
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## Appendix VII FLOODS AND HOW TO PREVENT THEM

### FLOODS!

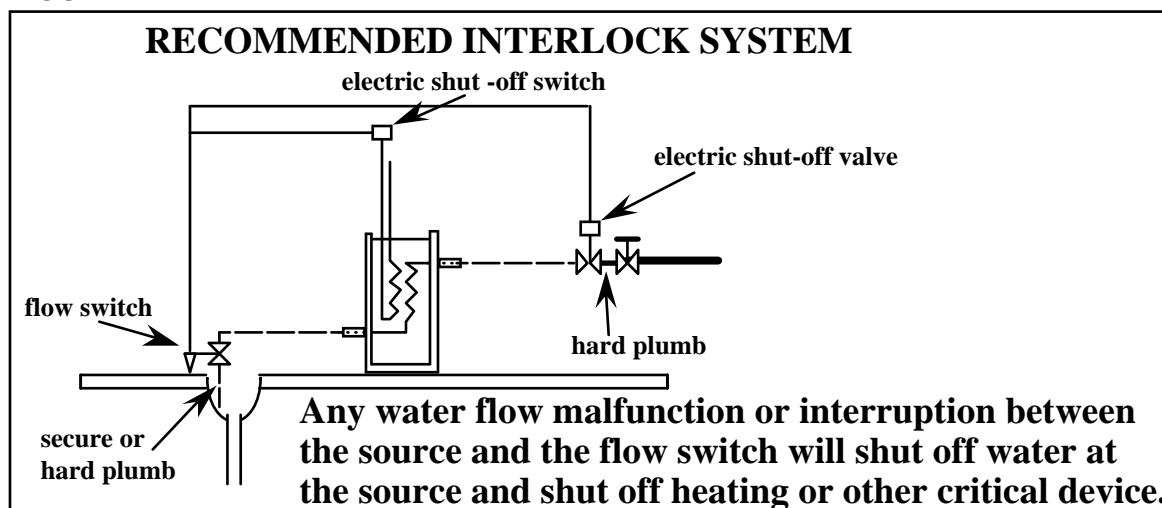
Simple measures can be taken to prevent flooding in the College. One such preventive measure is the use of hose clamps, inexpensive and available from the College Storeroom. (Twisted wire is not recommended because it can become brittle with age or over-tightening and can break.) Figure 1 illustrates the common causes of floods in labs.

FIGURE 1



Besides the use of hose clamps, another preventive measure is to use interlocks that will shut off the water at the source. This is particularly recommended when loss of water will result in an unsafe situation or operational damage. There are a number of such interlocks in use throughout the College which not only protect the building and other researchers' work from the effects of floods, but also protect the experimental equipment from the effects of water loss. Figure 2 presents a diagram of a typical interlock system.

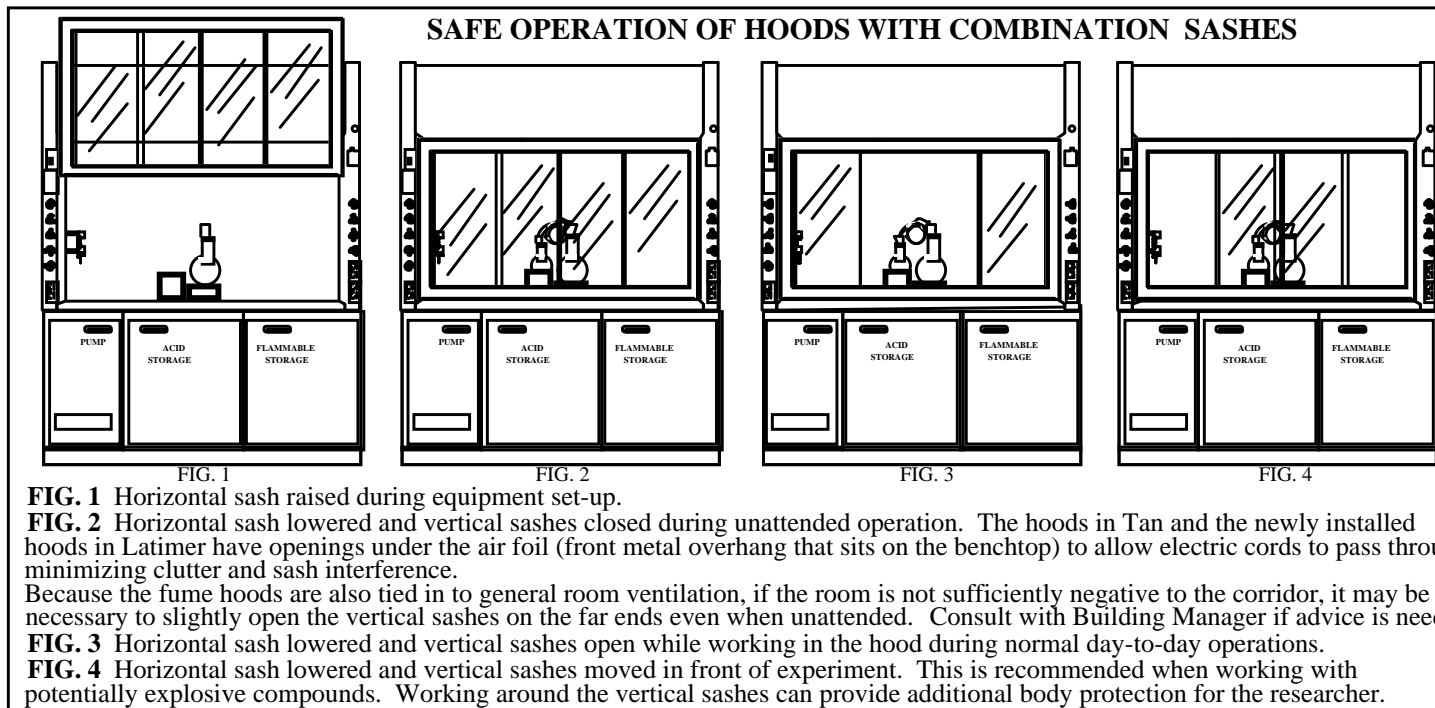
FIGURE 2



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## Appendix VIII SAFE OPERATION OF HOODS WITH COMBINATION SASHES



## Appendix IX College Administration and Services (Rev. 06/14)

### ACADEMIC ADMINISTRATION

Dean's Office, Room 420 Latimer Hall  
Prof. Doug Clark, Dean..... 2-5060

Prof. Matt Francis, Executive Associate Dean..... 3-9915  
Geraldyn Unterberg, Assistant to the Dean..... 3-0472  
Doris Kaeo, Front Desk..... 2-5060

College Relations, Room 420 Latimer Hall  
Mindy Rex, Assistant Dean, College Relations and  
Development..... 2-9506  
Nancy Horton, Director, Annual Giving..... 3-9351  
Camille Olufson, Director, Alumni Relations..... 3-7379  
Sonya Hunter, Development Services Director .... 3-5720  
Katherine Welsh, Dev. Svcs. Coordinator ..... 3-1497  
Michael Barnes, Principal Editor ..... 2-6867  
Leigh Moyer, Webmaster, ..... 2-2578  
Karen Elliott, Director, Special Projects ..... 3-8054  
Victoria Jaschob, Development Associate ..... 3-8065

Undergraduate Affairs, Room 121 Gilman Hall  
Prof. Marcin Majda, Undergraduate Dean.....2-7919  
Maura Daly, Student Affairs Officer ..... 3-0550  
Matt Munday, Student Affairs Officer ..... 3-1745  
Monica Jackson, Student Affairs Officer ..... 2-3451  
Joey Wong, Student Affairs Officer ..... 2-7919

Dept of Chemical Engineering, Room 201 Gilman Hall  
Prof. Jeff Reimer, Chair..... 2-2408  
Nitash Balsara, Vice Chair Graduate Education . 2-8973  
TBD, Vice-Chair U/G Affairs .....  
Kim Eastman, Management Svcs Officer ..... 2-0979  
Carlet Altamirano, Graduate Student Affairs  
Officer.....2-1533  
Christine Balolong, Chairman's/MSO's Assistant2-9633

Department of Chemistry, Room 419 Latimer Hall  
Prof. David Wemmer, Chair..... 3-9057  
Prof. Ronald C. Cohen, Vice-Chair..... 2-2735  
Prof. Chris Chang, Vice-Chair ..... 2-4704  
Prof. Kristie Boering, Vice-Chair ..... 2-3472  
Prof. Richmond Sarpong, Vice-Chair ..... 3-6312  
Homa Khamsi, Management Services Officer .... 3-9058  
Barbara McWilliams, Seminar Coordinator..... 3-0572  
Aileen Harris, Student Affairs Officer.....2-5884  
Lynn Keithlin, Student Affairs Officer ..... 2-5883  
Lauren Nakashima, Academic Personnel Specialist 2-4032  
Theodosia Valrey, Graduate Unit Manager ..... 3-0571

### ADMINISTRATIVE AND BUSINESS SERVICES

Suzanne Sutton Assistant Dean  
for Admin. and Finance ..... 3-2887  
Annabelle de la Rosa, Finance Director.....3-1543  
Cherie Harper, Fund Mgr, Cont/Grants ..... 2-4311  
Charles Chen, Fund Manager, Proposal Coord... 2-1126  
Dana Kowalski, Fund Manager, Cont/Grants .... 3-1544  
Mark Peaslee, Fund Manager, Proposal Coord... 3-1542  
Nils Ohlson, Recharge Billing..... 2-1325  
Angelique Tolliver, Financial Analyst..... 2-1126

Business & Financial Services (CSS)  
Robin Baca, Supervisor .....664-9467  
Jorge Perez, Staff..... 664-9543  
Rosanna Chiu, Staff.....664-9533

Human Resources, Room 401 Latimer  
Kenya Raymond, HR Partner ...664-9613 / 292-7569  
Iris Acosta, AP Partner .....664-9755

Organic & Physical Storeroom, Room 791 Tan Hall  
Sean Yarbrough, Supervisor ..... 2-5608  
Brad Manuel, Storekeeper ..... 2-0177

Shipping/Receiving, B84A Hildebrand Hall  
Carl Lamey, Supervisor ..... 2-5384, 2-3469  
Roy Washington ..... 2-5384, 2-3469  
Simiel Harris.....2-5384, 2-3469

### COLLEGE ENGINEERING

Alexander M. Shtromberg, Assistant Dean of  
Engineering and Facilities (444 Latimer) ..... 2-2345

Building Management, Room 119 Gilman Hall  
Inna Massen, Building Facilities Manager ..... 3-4220  
Alexei Anderson, Facilities Specialist..... 2-5231  
Igor Kligman, Facilities Specialist..... 2-5232

Shops and Research Support Services  
Norman Tom, Manager (B4 Lat) ..... 2-3166  
Clif Marshall, Electronic Shop, (B44 Hild) ..... 2-4594  
James Breen, Glass Shop (B63 Hild)..... 2-3454  
Eric Granlund, Machine Shop (B4 Lat) ..... 2-4486  
Clif Marshall, RSS - Electrical, (B17 Lat) ..... 2-4594  
Yi-Min Hsieh, RSS - Pump Repair (B4C Lat)..... 3-2373  
Mike Brateng, RSS - Wood Shop(B18 Lat) ..... 3-2079  
Phil Simon, Student Shop, (B4A Lat) ..... 2-2057

Liquid Air Operation (DG15 and BG9 Gia)  
Philip Simon, Supervisor ..... 2-4165  
Kinfe Lita, Dev. Tech V. .... 2-4165

Health and Safety Program  
Michael Kumpf, Director (317 Lewis) ..... 3-0648  
Vacant, Contaminated Lab.Debris Disposal  
(317 Lewis) ..... 3-0526  
Emery Wilson, Reuse & Chem Disposal (780 Tan)2-2630

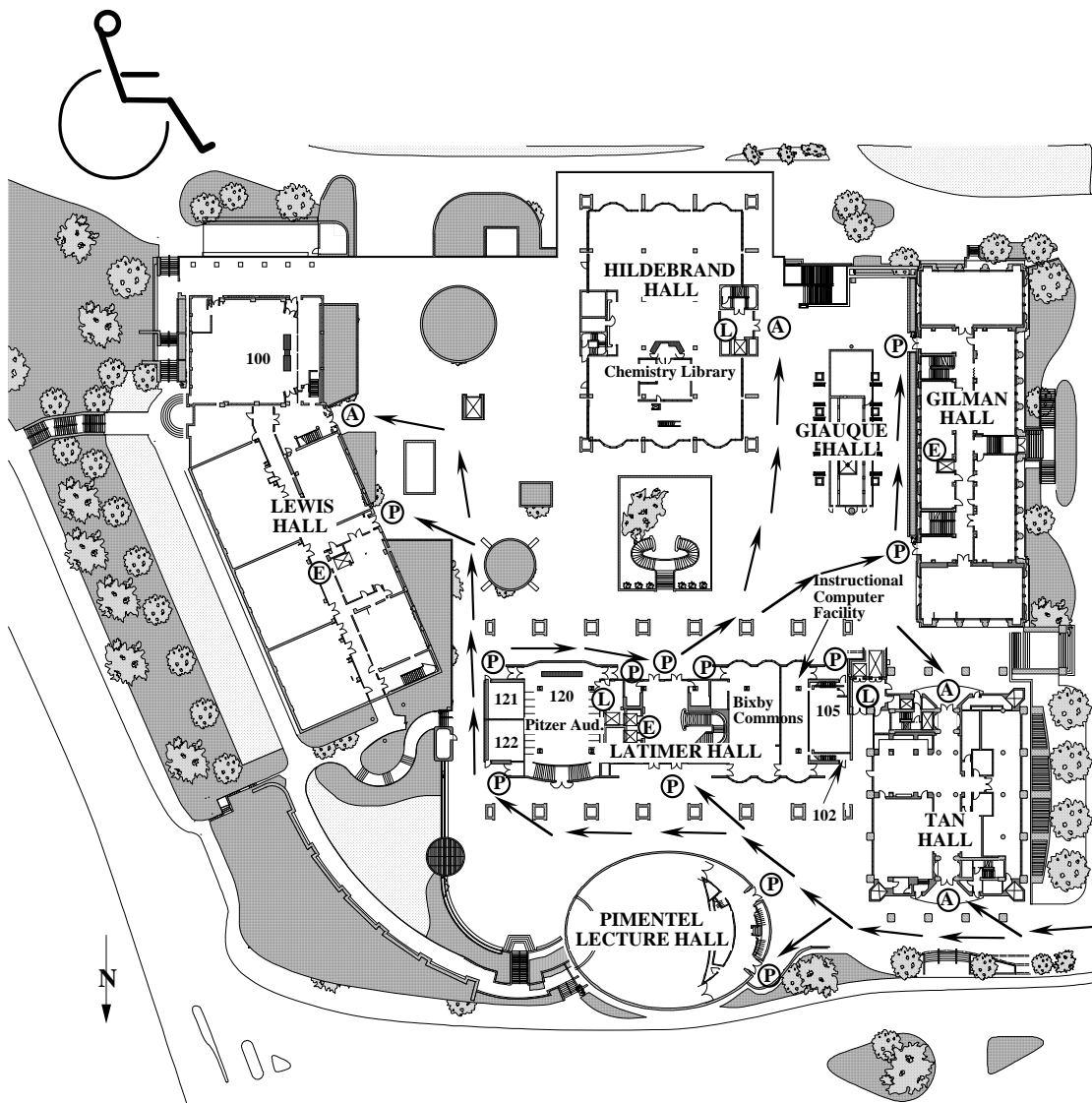
INFORMATION SYSTEMS (BG 13 Giauque)  
Kelly McDonald (173 Tan)..... 3-1032  
Johnathon Kogelman, IT Director (BG-12 Giauque) 2-4838  
Ryan Tran, CSS Desktop Support..... 664-9000  
Catherine Madsen, Database Mgt .....3-1706

### INSTRUCTIONAL SUPPORT OPERATIONS

Chemistry, Robert Lamoreaux, Mgr. (211 Lat)..... 2-3448  
Chem 4A, B; 5, Dante Valdez, Jr. (220 Lat) ..... 2-6981  
General Chem 1A, B, Karen Chan (220 Lat) ..... 2-6981  
Chem 3A,B; 112A,B, Bob Steiner (309 Lat) ..... 2-6599  
Storeroom (315 Lat) ..... 2-6980  
Pimentel Demo. Lab, Karen Chan (17 Pim)..... 2-6687

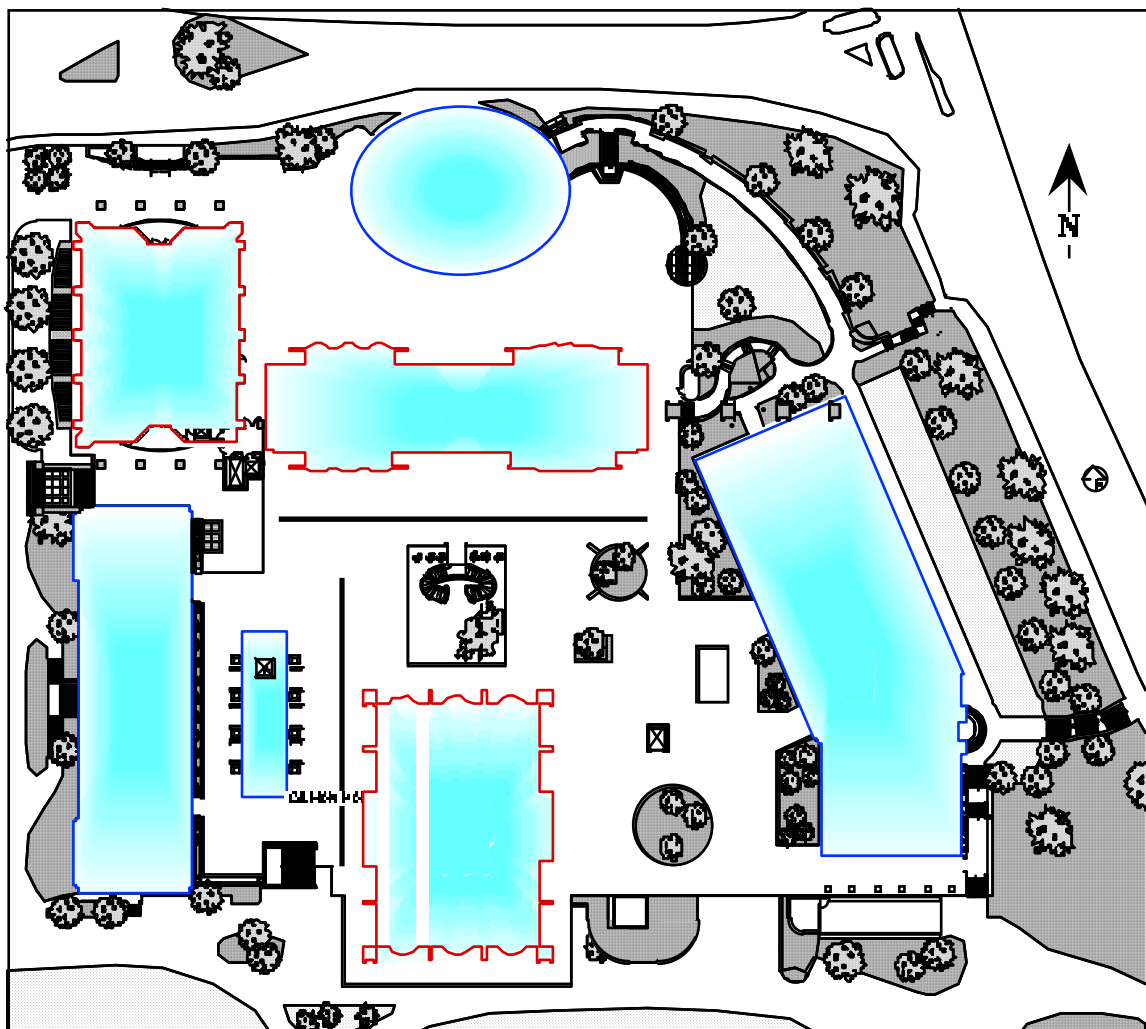
<b>Linda Tiffany, Admin Assistant (338 Lat) .....2-7443</b>	<b>NMR Lab, Chris Canlas (D11, D1 Latimer)..... 2-6407</b>
<b>Lucia Briggs, Administrative Specialist (332 Lat)3-9939</b>	<b>X-Ray Diff., Antonio DiPasquale (29, 32 Lewis) .. 2-8444</b>
<b>Esayas Kelkile, CBE R&amp;D Engineer (118 Gil).....3-5478</b>	<b>Library, Chemistry (100 Hildebrand Hall) ..... 2-3753</b>
<b>SPECIAL SERVICES</b>	<b>Brian Quigley, Agnes Concepcion ..... 2-4345</b>
<b>Analytical Facilities</b>	<b>Molecular Graphics, Kathleen Durkin (177 Tan) .... 2-6719</b>
<b>Mass Spec Ulla N. Andersen (Stanley Hall).....2-0701</b>	

## APPENDIX X COLLEGE OF CHEMISTRY PLAZA ACCESSIBILITY MAP



- ↗ ACCESSIBLE ROUTES
- (P)** ACCESSIBLE BUILDING ENTRANCES
  - (A)** ACCESSIBLE BUILDING ENTRANCES WITH AUTOMATIC DOOR HARDWARE
  - (E)** ALL CHEMISTRY BUILDINGS HAVE ELEVATORS WITH EXTERNAL ACCESSIBLE CALL BUTTONS. THE FOLLOWING ELEVATORS HAVE BEEN FULLY UPGRADED FOR ACCESSIBILITY
  - (L)** Latimer Freight (access via alcove leading to 120 Latimer)  
Hildebrand Passenger  
Tan Passenger and Freight
- THE FOLLOWING RESTROOMS HAVE BEEN UPGRADED FOR ACCESSIBILITY:
- |                     |                                    |
|---------------------|------------------------------------|
| <b>WOMENS</b>       | <b>MENS</b>                        |
| Gilman, 1st floor   | Gilman, basement (partial upgrade) |
| Hildebrand, B level | Hildebrand, B level                |
| Lewis, ground floor | Lewis, ground floor                |
| Latimer, 1st floor  | Latimer, 1st floor                 |
| Latimer, 2nd floor  | Latimer, 2nd floor                 |
| Latimer, 6th floor  | Latimer, 6th floor                 |
| Tan, all floors     | Tan, all floors                    |
- THE COLLEGE OF CHEMISTRY DIRECTORY OF FACULTY AND ADMINISTRATION IS LOCATED IN THE LATIMER HALL PLAZA LOBBY.
- ADDITIONAL DIRECTORIES ARE LOCATED ON THE PLAZA AND FIRST FLOOR (ABOVE GROUND) OF LEWIS, THE B LEVEL OF HILDEBRAND IN THE ELEVATOR LOBBY AND THE FIRST FLOOR OF GILMAN.
- FOR FURTHER INFORMATION REGARDING ACCESSIBILITY IN THE COLLEGE OF CHEMISTRY, CONTACT THE BUILDING MANAGER IN 410 LATIMER, AT 643-4220.
- FOR GENERAL INFORMATION ON CAMPUS ACCESSIBILITY ISSUES, CONTACT THE CAMPUS DISABLED STUDENTS PROGRAM AT 642-0518 (VOICE) OR 642-6376 (TTY).

## APPENDIX XI COLLEGE OF CHEMISTRY COMPLEX



### COLLEGE OF CHEMISTRY COMPLEX UNIVERSITY OF CALIFORNIA AT BERKELEY

GIAUQUE HALL:	Physical Chemistry research and offices Electronic Shop and Liquid Air Operations
GILMAN HALL:	Department of Chemical Engineering Office Chemical Engineering and Theoretical Chemistry/Chemical Engineering research and offices, and Chemical Engineering teaching labs
HILDEBRAND HALL:	Physical Chemistry and Biochemistry research, Molecular and Cell Biology research and offices; classrooms Chemistry Library, Glass Shop, and Receiving
LATIMER HALL:	College Administration and Department of Chemistry Office Organic and Inorganic Chemistry research, offices and teaching labs; Undergrad Computing Facility; classrooms and lecture hall Mechanical Shops, NMR, and Wood Shop
LEWIS HALL:	Organic and Inorganic Chemistry research and offices; classroom and lecture hall Mass Spec Lab and CheX-Ray
PIMENTEL HALL:	550-seat lecture hall; backstage experimental set-up and storage facility
TAN HALL:	Chemical Engineering and Chemistry research labs and offices Undergraduate Computing Facility, lecture hall, Chemical Storeroom and Reuse Facility, Office Supply Storeroom, McCollum Room Conference Facility