

# **SAFETY MANUAL**

## **for the**

# **NORTHWEST ANIMAL FACILITY**

**University of California, Berkeley**

## **EMERGENCY PHONE NUMBERS**

**FIRE - POLICE - AMBULANCE: 911**  
*(from pay telephones, dial 911 -- no coins necessary)*  
*(from cell phones, dial 642-3333)*

<b>UC POLICE</b> .....	<b>2-6760</b>
<b>(24-hr. non-emergency service)</b>	
<b>LABORATORY SAFETY OFFICER</b> .....	<b>849-7142</b>
<b>ENVIRONMENT, HEALTH &amp; SAFETY</b> .....	<b>2-3073</b>
(hazardous spills, general safety information., etc.)	
<b>FACILITY SERVICES</b> .....	<b>2-1032</b>
<b>24 hour emergency service</b> .....	<b>2-1032</b>
(elevators, electricity, water, ventilation, sewer, grounds)	
<b>NAF BUILDING COORDINATOR</b>	
Quig Driver (203A NAF) .....	<b>2-4598</b>
alternate: Gbenga Adesida (203 NAF) .....	<b>2-0533</b>

## TABLE OF CONTENTS

- I. INTRODUCTION
  - Table of Contents
  - Introduction
  
- II. SAFETY PERSONNEL AND MAPS
  - Safety Personnel
  - Map of Emergency Assembly Area
  - Map of Emergency Management Areas
  - NAF Upper Level Floor Plan (*Not available on-line*)
  - NAF Lower Level Floor Plan (*Not available on-line*)
  
- III. EMERGENCY PROCEDURES
  - After-Hours Facility Use
  - Evacuation Procedures
  - Injuries
  - Fires
  - Fighting Small Fires
  - Fire Prevention and Maintenance Information
  - Earthquakes
  - Civil Disturbances
  - Criminal Activities & Civil Disturbances
  - Hazardous Material Release
  - Utilities
  - Elevators
  - Flooding
  - Gas
  - Steam
  - Ventilation
  - Emergency Fire Procedures
  - Your Extinguisher Must Fit the Fire
  - Fire Alarm Evacuation Procedures
  - Duck, Cover and Hold earthquake Procedures
  - Bomb Threat Procedures for the Berkeley Campus
  - Letter and Package Bomb Indicators
  - Information on Suspicious Package Identification
  
- IV. LABORATORY SAFETY
  - Personal Safety
  - General Laboratory Safety
  - A User-Friendly Workstation
  
- V. CHEMICAL SAFETY
  - Chemical Use and Handling
  - Chemical Storage
  - Chemical Spill Procedures
  - Chemical Disposal
  - Who to Call When a Spill Happens
  - Chemical Inventory Fact Sheet
  - Interim Guidelines for Drain Disposal of Chemicals
  - Unwanted Hazardous Chemicals Help Sheet
  - Chemical Waste Recharge Fact Sheet
  - Minimizing Hazardous Waste Fact Sheet
  - Hazard Communication Fact Sheet
  
- VI. TRAINING
  - Training
  - Facility Inspections
  - New Policy Regarding Failure to Attend Mandatory NAF Training Sessions
  - Office of Environment, Health and Safety Fact Sheet

VII. BIOHAZARD CONTAINMENT FACILITY

\*\*Please refer to the Biohazard Containment Facility Safety and Operations Manual  
Handling and Disposing of Sharps Help Sheet  
Guidelines for Managing and Disposing of Medical Waste

*Please note: Forms and templates not available in this manual electronically (please see [ehs.berkeley.edu](http://ehs.berkeley.edu))*

VIII. \*\*All forms listed below are available from EH&S at BLANK INSPECTION AND REPORT FORMS

<http://www.ehs.berkeley.edu/iipp/formdirectory.html>

Report of Unsafe Condition or Hazard

General Safety Self-Inspection Report

Laboratory Safety Self-Inspection Report

Hazard Correction Report

Occupational Accident, Injury or Illness Investigation  
Report

Safety Training Attendance Record

*To be used by individuals as appropriate.*

IX. USER-COMPLETED INSPECTION AND REPORT FORMS

X. USER-SUPPLIED LAB SPECIFIC MSDS FORMS

## I. INTRODUCTION

The purpose of this manual is to provide the users of the Northwest Animal Facility (NAF) with the safe and proper procedures required of all personnel who use this facility. Knowledge of the procedures will protect you from the hazards that may exist in your workplace by helping you to identify what they are and direct you in responding to an emergency if one should occur. Compliance with the requirements is necessary for both yourself and your co-workers.

**All personnel working within the NAF must abide by the provisions of this manual.**

When beginning work in the NAF, all personnel are to receive training in facility safety procedures and other training pertinent to their work, as described in the Training section of this manual. No one will be granted ongoing access to the NAF without having documented proof of this training as evidenced by the completed "Record of Employee Training and Personal Emergency Information" form found in section 6 of the manual. You should make photocopies of the original forms provided in this manual before you fill them out so that you will have blank copies when you need them. Additional copies of the forms in section 8 are available from the Laboratory Safety Officer. If you have questions regarding any part of this manual please contact either your supervisor or the Laboratory Safety Officer listed in the Safety Personnel Roster in section 2.

Federal and State laws require that specific documents be prepared and used in providing safe conditions in laboratories. The procedures described in this manual arise from these laws, and also make good sense. Many of the health and safety requirements that apply to campus workplaces have been organized into The Injury and Illness Prevention Program (IIPP), which includes provisions for identifying, reporting and correcting hazards, providing safety training for workers, identifying those people responsible for safety activities, and documentation of all safety-related actions. Employees should be covered by the IIPP of their department; this manual provides supplemental facility information. This manual makes every effort to present this safety program in a manner consistent with the provisions of the campus IIPP. Another set of regulations presented in this manual governs safe laboratory practices, The Chemical Hygiene Plan (CHP). These require maintaining a chemical inventory, following safe hazardous material handling, storage and disposal procedures, labeling hazardous materials containers properly, and having a plan for responding to emergencies. Lastly, there is another set of requirements describing how this building is to be used, The Mitigation Monitoring Program, created in response to concerns from the public. The requirements for compliance to all of these laws and commitments are described in the following sections of the manual.

Security for the Northwest Animal Facility is closely controlled. Entry to the building is by a card-key, which can only be issued to personnel who attend the NAF General Safety Training session at the beginning of their use of the NAF. This training is offered periodically throughout the year by the Laboratory Safety Officer (LSO). In addition, there is a biohazard containment facility (BCF) within the NAF. Access to the BCF facility is controlled by a separate card-key code and is granted only to those people who will be working in the facility and who have completed the BCF safety training. Please contact the LSO at 849-7142 for more information.

## II. SAFETY PERSONNEL

There are a number of people who are responsible for providing you with a safe workplace. The most important person is you, because only you know exactly what your work entails. If you work with chemicals, you should either prepare (if you are the laboratory safety contact) or in any event familiarize yourself with the "CHEMICAL HYGIENE PLAN" template that must be completed and posted in each laboratory. This is a multi-page flipchart, edged in yellow. The first page lists the emergency contacts for your location who are familiar with the hazards in your specific work area. If you need a blank CHP template, contact EH&S at 2-3073 or the LSO at 849-7142.

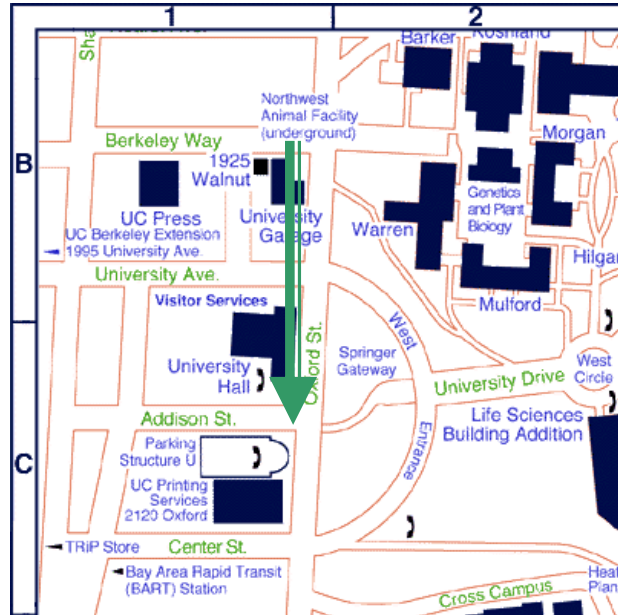
The Office of Laboratory Animal Care (OLAC) is responsible for safety in the NAF as a whole, but does not directly oversee operations in some laboratory areas (for example, the BCF or Psychology laboratories). However, the Laboratory Safety Officer (LSO) is the Environment, Health and Safety representative for the facility and will work with both OLAC personnel and the academic departments using these facilities to help coordinate safety efforts. In addition, the NAF Building Safety Committee is comprised of representatives of several departments, which use the NAF, and serves as the policy-implementing group for the building. If you have questions about any safety procedures, first ask your individual laboratory safety contact. The LSO should be your next resource, followed by the Floor Safety Representative. If you still need assistance, contact either the Building Coordinator or a member of the Safety Committee.

### SAFETY PERSONNEL ROSTER

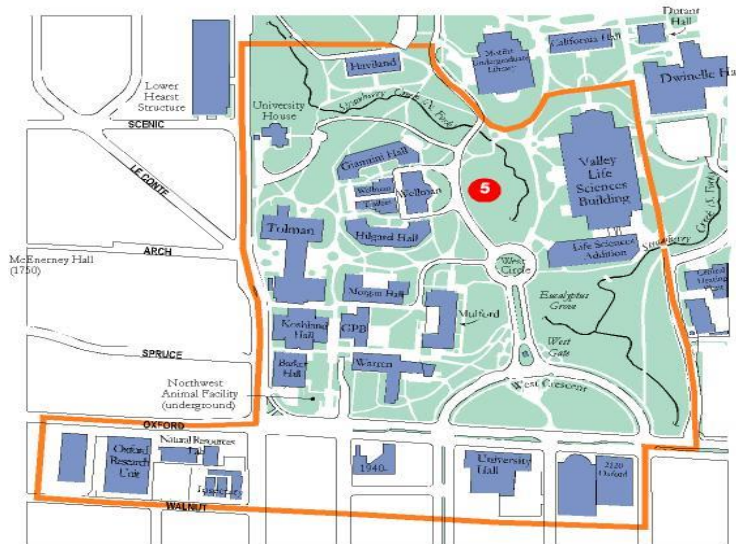
LABORATORY SAFETY OFFICER:	Chips Hoai 317 University Hall (EH&S)	849-7142
LOWER LEVEL REPRESENTATIVE alternate	Sarah Laraway Amanda Larson	664-4918 642-6603
UPPER LEVEL REPRESENTATIVE alternate	Gbenga Adesida Quig Driver	642-0533 642-4598
BUILDING COORDINATOR alternate	Quig Driver Gbenga Adesida	642-4598 642-0533
NAF BUILDING SAFETY COMMITTEE:		
Greg Lawsons	OLAC ( Director)	643-9567
Quig Driver	OLAC (Manager)	642-4598
Chips Hoai	EH&S (NAF LSO)	849-7142
Sarah Laraway	OLAC	642-6603
Amy Holt	MCB	642-9853
Yuka Minton	Helen Wills Neurosciences Inst.	642-8063

Maps are provided on the next three pages with which you will need to be familiar. The first map shows that Springer Gateway is the Emergency Assembly Area, and the route to take to get there. The second map identifies the Emergency Management areas for the west-end of campus. The third and fourth maps are upper and lower level floor plans of the NAF showing the locations of exits, fire alarm pull stations, and fire extinguishers (refer to maps posted near elevators in the NAF). Be thoroughly familiar with the facilities that are closest to your work area.

### NAF EMERGENCY ASSEMBLY AREA (EAA) MAP



### EMA 5 - North Fork Strawberry Creek



### III. EMERGENCY PROCEDURES

#### AFTER-HOURS FACILITY USE

Because research is often conducted outside of “normal business hours” (i.e. Mon.-Fri. 8:00-5:00pm), special procedures have been devised to provide for emergency communications during the “after-hours” period. If you are going to work in the NAF on weekends or campus holidays, you **must sign in** when you enter **and out** when you leave in the logbook located on the security guard’s desk in the main corridor of the upper level of the NAF. Please be sure to include the room you will most probably be in, and indicate if the room is in the Biohazard Containment Facility (BCF) as the guard cannot enter the BCF to find someone. The outer doors will be locked during that time so you will need to use your keycard to enter the building as well as go downstairs. If you are downstairs during normal hours and your work will extend more than 30 minutes into the after-hours period, you must go upstairs and sign in. This procedure will allow a guard to determine how many people are in the building and where they will most likely be if urgent communication with an occupant becomes necessary, or if an evacuation is required.

#### EVACUATION PROCEDURES

**EXIT BUILDING VIA THE STAIRWAYS. DO NOT USE ELEVATORS.** Take time to familiarize yourself with evacuation routes in advance. Maps showing location of all emergency exits and fire alarms and extinguishers are posted by all elevator doors, and also can be found in section two of this manual.

**ASSIST THE INJURED AND DISABLED WHEN POSSIBLE.** Do not move the seriously injured unless there is danger of further injury. Ask disabled persons in wheelchairs how best to assist them. If there are deaf or hearing impaired persons nearby, be sure they know that there is an emergency. If it is necessary to leave someone in the building, try to leave them in a relatively secure place (e.g., during a fire, the stairwell is one of the safer places to be). After evacuating the building, find the proper officials and report the location and condition of persons who need assistance.

**ONCE OUTSIDE THE BUILDING, GO DIRECTLY TO THE EMERGENCY ASSEMBLY AREA DESIGNATED FOR YOUR LABORATORY OR UNIT. ALL NAF PERSONNEL ARE TO PROCEED TO “SPINGER GATEWAY”, THE GRASSY AREA ACROSS THE STREET FROM UNIVERSITY HALL.** Stay on the north half (closest to the NAF); the other side is used by another building. Keep at least 100 feet away from buildings to avoid danger from falling glass, etc. Please look at the map in section two of this binder, and locate where you are to go. If you have any trouble locating your meeting area, ask your safety representative. The safety representative for each laboratory and office will take a head count and will report the status of the unit to either the Building Coordinator (stationed at the north side of the Springer Gateway area) or the Alternate Building Coordinator. All safety representatives, or their alternates, must report in, whether or not anyone is missing. The Building Coordinator will then report to campus officials. Once the personnel in the NAF are accounted for they may be directed to move to another location but **DO NOT LEAVE** the emergency assembly area until directed to do so.

**DO NOT RE-ENTER THE BUILDING UNTIL SOMEONE IN AUTHORITY TELLS YOU THAT IT IS SAFE TO DO SO.**

## Immediate Emergency Notification

### LIFE-THREATENING EMERGENCY NUMBERS :

911 from a public or campus telephone, or 642-3333 from a cell-phone

### NON-LIFE-THREATENING EMERGENCY NUMBERS:

<u>Department</u>	<u>Phone Number</u>
University Police (police.berkeley.edu)	642-6760
Environment, Health & Safety (ehs.berkeley.edu)	642-3073
Facility Services	642-1032
<u>Medical Facilities</u>	<u>Phone Number</u>
Tang Center Clinic, 2222 Bancroft Way (uhs.berkeley.edu) Monday - Friday, 8 am-5 pm (Last appointment 4:00 pm). Closed 11:45 am-12:45 pm.	642-2000
Tang Center Urgent Care 8:00 am to 5:00 pm Monday – Friday (Last appointment 4:00 pm). (During the summer, Urgent Care is not open on the Weekends.)	642-3188
Alta Bates Medical Center, 2450 Ashby Avenue Open 24 hours, 7 days a week	204-1303

<u>Emergency Information</u>	<u>Phone/FM-AM Dial Numbers</u>
Berkeley Radio Station (City of Berkeley)	1610 AM
KALX Radio Station (UC Berkeley)	90.7 FM
Building Coordinator Information Line	642-4258

### ANIMAL-RELATED INJURIES

**911 SHOULD ALWAYS BE CALLED FOR ANY LIFE-THREATENING INJURY OR ILLNESS.**

**THE MEDICAL FACILITIES LISTED ABOVE ARE AVAILABLE FOR URGENT CARE. FOR ANY ANIMAL-RELATED INJURY, SUCH AS A BITE OR SCRATCH, IMMEDIATELY FLUSH THE WOUND WITH SOAP AND WATER AND APPLY FIRST AID. NOTIFY THE OLAC MANAGER ON SITE OR A VET (CALL 3-VETS) AS WELL AS YOUR SUPERVISOR. GO TO THE TANG CENTER AT 2222 BANCROFT WAY FOR MEDICAL EVALUATION.**

### BUILDING ALARMS

This building has several alarm sounds.

- The **evacuation alarm** is an automated voice notification system (woman's voice).

When you hear the evacuation alarm, leave the building. Follow evacuation procedures (see section below).

- The **elevator alarm** is a ringing bell sound (similar to a school-bell).

When you hear the elevator alarm, call University Police at 642-6760.



- **The Bio-Safety Level 2 and 3 Physical Separation Door Alarm** (buzzing sound in main administrative office of OLAC).

When alarm sounds it means someone has used the emergency exit in or out of the BL2 or BL3. Anyone using this door as an entrance or exit should contact Quig Driver at 642-4598 or 642-9232 to explain why (this door should only to be used during an emergency).

- **The Barrington System Alarm** is a high pitched “EEEEEEEEEEEE” sound which indicates a problem with heating, ventilation or air condition.

When you hear the Barrington System Alarm, call Facility Services at 2-1032 or UCPD at 2-6760 if after normal business hours.

Other types of alarms for which Physical Plant should be contacted are:

- **Biosafety cabinet and or fume hood alarms**

- **“Minus 80” (-80) freezer alarms**

- **Sump pump alarms**

- **Lighting and/or temperature experiments** in specific animal rooms alarms (in addition to contacting Physical Plant, call the appropriate name indicated on the door)

## EMERGENCY NOTIFICATION PROCEDURES

When you call 911 (or any other emergency number) from a campus location to request emergency assistance, you will be connected to the University Police Dispatch. Call from a safe location and remember to:

- Stay calm.
- Be prepared to answer the following questions:
  - Where is the emergency located?
  - What is the emergency? (fire, medical, hazardous material, etc.)
  - How did it happen?
  - When did it happen?
  - Who are you? (your name)
- Gather any other information that may be useful for the emergency responders (e.g. are there any injuries involved?).
- Do not hang up until instructed to do so by the dispatcher.

You do not need to know all the answers to these questions, but quickly gather as much information as you can. Give a telephone number or safe location where the emergency responders can call or meet you, and wait for the responders at that safe location.

**Please notify the Building Coordinator of all non-evacuation emergencies at 642-4598 or 642-9232 for appropriate follow-up with individuals and/or laboratories effected.**

## GENERAL EVACUATION PROCEDURES

When evacuating your building or work area:

- Stay calm; do not rush and do not panic.
- Safely stop your work.
- Gather your personal belongings if it is safe to do so. (Reminder: take prescription medications out with you if at all possible; it may be hours before you are allowed back in the building.)
- If safe, close your office door and window, but do not lock them.
- Use the nearest safe stairs and proceed to the nearest exit. Do not use the elevator.
- Proceed to the designated Emergency Assembly Area (EAA) and report to your roll taker.
- Wait for any instructions from emergency responders.
- Do not re-enter the building or work area until you have been instructed to do so by the emergency responders.

**Please Note:** *Animals should never be taken out of the building during an emergency.*

**If animals are outside of their cage, return them to their enclosure and follow evacuation procedures. If you are in the middle of a surgery or other procedure, stop at once and return the animal to their enclosure or euthanize the animal if necessary and follow normal evacuation procedures. Human safety should always be your first concern.**

## EVACUATION PROCEDURES

A building occupant is required **by law** to evacuate the building when the fire alarm sounds.

### Emergency Information

Posted evacuation diagrams including routes and fire alarm pull stations

### Locations

Base of stairways, elevator landings and inside public doors.

Maps of Emergency Assembly Area (EAA)

At elevator landings and inside public doors.

## FIRE PROCEDURES

A building occupant is required **by law** to evacuate the building when the fire alarm sounds.

### If there is a fire in your work area:

- First, notify the fire department by pulling the pull station and (from a safe distance) calling 911 to provide details of the situation (See “emergency Notification Procedures” above).
- If you have been trained in the use of a portable fire extinguisher and are able to safely extinguish the fire, you may do so. Be sure you have a safe exit from the area and leave if one extinguisher does not put out the fire.
- Evacuate the building as soon as the alarm sounds and proceed to the designated Emergency Assembly Area (EAA) (see "General Evacuation Procedures" in Section II).
- On your way out, warn others nearby.
- Move away from fire and smoke. Close doors and windows if time permits.
- Touch closed doors. Do not open them if they are hot.
- Use stairs only; do not use elevators.
- Move well away from the building and go to your designated EAA.
- Do not re-enter the building or work area until you have been instructed to do so by the emergency responders.

### If there is a fire in your building:

- Follow evacuation procedures as soon as you hear the fire alarm sound (see "General Evacuation Procedures" in Section II).

## FIRE PREVENTION PROCEDURES

To prevent fire, this building maintains a good housekeeping policy, which includes:

- Storing flammable and combustible materials in an approved manner
- Avoiding accumulation of flammable and combustible materials in work areas

The Building Coordinator works with the Campus Fire Prevention Division at EH&S to ensure that there is no excess accumulation of flammable and combustible materials in this building.

Custodial services are provided to this building by

**Facility Services**, at 2-1032 if you have any questions regarding custodial services.

**A schedule of custodial services in this building may be obtained by contacting the above provider. The Building Coordinator also works with the above provider (FS for UC Buildings on campus) to maintain fire extinguishers, fire alarm systems, and fire sprinkler systems in this building and to keep them in good working condition. Fire extinguishers provided in the building are type “A-B-C” (see diagram “Your Extinguisher must fit the fire”).**

## POTENTIAL FIRE HAZARDS

Following are the potential\* fire hazards identified in (Northwest Animal Facility):

Combustible materials (e.g. paper, cardboard, wood, etc.)

Flammable/combustible gases in laboratories

Flammable/combustible solids in laboratories

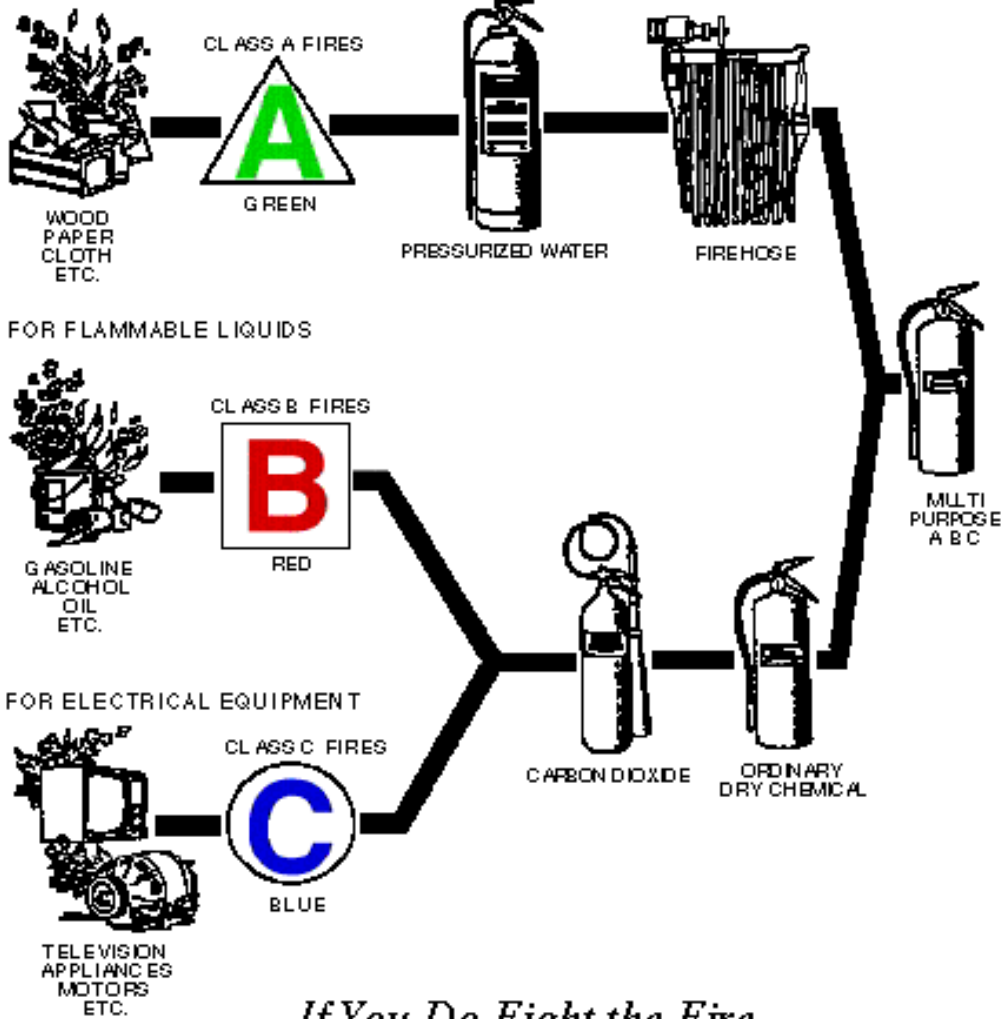
Flammable/combustible liquids in laboratories

\*Fire hazards are controlled by proper storage and housekeeping procedures.

## *Your Extinguisher Must Fit the Fire*

FOR ORDINARY COMBUSTIBLES

HERE ARE THE MOST EFFECTIVE COMMON TYPES:



## *If You Do Fight the Fire*

### **PULL**

the pin: Some extinguishers require releasing a lock latch, pressing a puncture lever, or taking another first step.



### **SQUEEZE**

the handle: This releases the extinguishing agent.



### **AIM**

low: Point the extinguisher nozzle (or its horn or hose) at the base of the fire.



### **SWEEP**

from side to side: Keep the extinguisher aimed at the base of the fire and sweep back and forth until it appears to be out. Watch the fire area. If fire breaks out again, repeat the process.



## EARTHQUAKE PROCEDURES

### In case of an earthquake:

## **Duck – Cover - Hold**

Inside the building:

- Duck under the nearest sturdy object and hold onto it until the shaking stops. If you are not near a sturdy object, make yourself as small as possible and cover your head and neck.
- If you stand in a doorway, brace yourself against the frame and watch out for a swinging door or other people.
- Avoid windows, filing cabinets, bookcases, and other heavy objects that could fall or shatter.
- Stay under cover until the shaking stops, and then leave the building.
- If it is safe to do so, stabilize any laboratory procedure that could lead to further danger. (For instance, turn off Bunsen burners or electrical equipment.)
- Return any animals you are working with to their cage.

### Outside the building:

- Move away from trees, signs, buildings, and electrical poles and wires.
- Protect your head with your arms from falling bricks, glass, plaster, and other debris.
- Move away from fire and smoke.
- Proceed to the Emergency Assembly Area if safe, or proceed to a pre-designated alternate assembly area. Check in with your roll taker(s) to let them know that you are all right (see "General Evacuation Procedures" above this section).
- Stay alert for further instructions.

## CIVIL DISTURBANCE/DEMONSTRATION PROCEDURES

Most campus demonstrations are peaceful and people not involved should attempt to carry on business as usual. Avoid provoking or obstructing demonstrators. Should a disturbance occur, call the University Police at 911.

If a disturbance seems to threaten the occupants of the building, report it immediately to the University Police and take the following actions:

- Alert all persons in the area of the situation.
- Lock all doors and windows.
- Close blinds to prevent flying glass.
- If necessary, your department may decide to cease work operations.
- If necessary to evacuate, follow directions from police.

If evacuation occurs, meet at the location designated as your Building's Emergency Assembly Area (EAA) and wait for additional instructions and information (see "General Evacuation Procedures" above).

**Please Note:** *No one should be permitted access to the Northwest Animal Facility without an individual card key of their own.*

## CRIMINAL OR VIOLENT BEHAVIOR

Everyone is asked to assist in making the campus a safe place by being alert to suspicious situations or persons and reporting them as outlined below.

If you are the victim of, or are involved in, any on-campus violation of the law such as assault, robbery, theft, overt sexual behavior, etc., do not take any unnecessary risk. Notify University Police as soon as possible and give them the following information:

- Nature of the incident
- Location of the incident
- Description of the person(s) involved
- Description of the property involved

If you witness a criminal act or notice person(s) acting suspiciously on campus, immediately notify University Police at 911.

Assist the police when they arrive by supplying them with any additional information requested; ask others to do the same.

## HAZARDOUS MATERIALS PROCEDURES

If you witness a hazardous material spill, evacuate the spill site and warn others to stay away. Call 911 if you believe the spill may be life threatening. If you can determine that the spill is not life threatening, follow the procedures outlined below.

If you are a hazardous material user (user), you should be trained by your supervisor on proper use and storage of hazardous materials. This training should include hazard information, proper procedures for preventing spills, and emergency procedures when a spill happens.

If as a user you spill a hazardous material or materials:

- Leave the area of the spill first and proceed to a safe location nearby. Then assess if you have the proper training and protective gear to clean up the spill.
- If you are able to clean up the spill, follow proper cleanup procedures and use proper personal protection. Manage the generated waste as appropriate. Consult your supervisor if necessary.
- Isolate the spill area to keep everyone away, and post signs as necessary.
- If you require assistance to clean up the spill:
- During normal business hours (8 AM-5 PM, M-F), you can call Environment, Health & Safety (EH&S) directly (642-3073).
- During off-hours, call University Police (642-6760). University Police will call EH&S after-hours responders.
- If you suspect or witness a release of a hazardous material to the environment (air, water, ground) call University Police.

## **UTILITY FAILURE**

In the event of a major utility failure, notify Facility Services at 2-1032

Before 8:00 AM and after 4:30 PM or on weekends and holidays, notify the UCPD at 642-6760.

Evacuate the building if the fire alarm sounds and/or upon notification by the police (see "General Evacuation Procedures" above).

A major power outage may not in itself be destructive, but a possible resulting panic or fire could endanger life and property. Panic can be partially avoided by an immediate decision on the need to cancel classes or meetings in progress or to evacuate the building (see "Evacuation Procedures" above).

In laboratory buildings, fume hoods do not operate during a power outage and most laboratories should not be used until the ventilation is properly restored. (For more information, refer to the EH&S Fact Sheet, "Power Failure".)

## **ELEVATOR FAILURE**

If you are trapped in an elevator, use the emergency telephone to call for assistance.

If the elevator does not have an emergency telephone, turn on the emergency alarm (located on the control panel) to signal your need for help.

## **FLOODING/PLUMBING FAILURE**

If flooding occurs (due to a plumbing failure or other problem):

- Cease using all electrical equipment.
- Notify University Police at 642-6760. If necessary, evacuate the building (see "General Evacuation Procedures" above).

## **GAS LEAK**

If you smell natural gas:

- Cease all operations immediately.
- Do not switch lights on or off.
- Notify University Police at 911, from a safe location.
- Evacuate as soon as possible (see "General Evacuation Procedures" above).

## **STEAM LINE FAILURE**

In the event of a steam line failure:

- Notify University Police at 911, from a safe location.
- Evacuate as soon as possible (see "General Evacuation Procedures" above).

## **VENTILATION PROBLEM**

If odors come from the ventilation system:

- Immediately notify Facility Services at: 642-1032



and Environment, Health & Safety (EH&S) at 642-3073.

- If necessary, cease all operations and evacuate area (see "General Evacuation Procedures" above).
- If smoke is present, activate the fire alarm system by pulling the pull station and call 911 from a safe location.

## **EXPLOSION OR BOMB THREAT PROCEDURES**

A suspicious-looking box, package, object, or container in or near your work area may be a bomb or explosive material. Do not handle or touch the object. Move to a safe area and call the University Police immediately at 642-6760. Use a telephone in a safe area. Do not operate any power switch, and do not activate the fire alarm.

### If there is an explosion:

- Take cover under sturdy furniture, or leave the building if directed to do so by emergency responders.
- Stay away from windows.
- Do not light matches.
- Move well away from the site of the hazard to a safe location.
- Use stairs only; do not use elevators.
- Call 911 if no one has called. Follow "Emergency Notification Procedures" above.

### If you receive a bomb threat (via the telephone):

- Stay calm and keep your voice calm.
- Pay close attention to details. Talk to the caller to obtain as much information as possible.
- Take notes. Ask questions:
  - When will it explode?
  - Where is it right now?
  - What does it look like?
  - What kind of bomb is it?
  - Where did you leave it?
  - Did you place the bomb?
  - Who is the target?
  - Why did you plant it?
  - What is your address?
  - What is your name?
- Observe the caller's:
  - Speech patterns (accent, tone)
  - Emotional state (angry, agitated, calm, etc.)
  - Background noise (traffic, people talking and accents, music and type, etc.)
  - Age and gender
- Write down other data:
  - Date and time of call
  - How threat was received (letter, note, telephone)
- Call University Police and submit your notes from the telephone call or the bomb threat (letter or note) to University Police.
- Follow University Police's instructions.

If you are told by emergency responders to evacuate the building (see "General Evacuation Procedures" above):

- Check your work area for unfamiliar items. Do not touch suspicious items; report them to campus authorities.
- Take personal belongings when you leave.

- Leave doors and windows open; do not turn light switches on or off.
- Use stairs only; do not use elevators.
- Move well away from the building and follow instructions from emergency responders.

## **Suspicious Letter and Parcel Recognition Points**

**Use your own judgment, but characteristics listed below may indicate a suspicious package.**

- Foreign Mail, Air Mail and Special Delivery
- Restrictive Markings such as “Confidential”, “Personal”, etc.
- Excessive Postage
- Handwritten or Poorly Typed Addresses
- Incorrect Titles
- Titles without Names
- Misspellings of Common Words
- Oily Stains
- No Return Address
- Excessive Weight
- Rigid Envelope
- Lopsided or Uneven Envelope
- Protruding Wires or Tinfoil
- Excessive Securing Material such as Masking Tape, String, etc.

## IV. Laboratory Safety

Further guidance on lab safety is available from EH&S at [www.ehs.berkeley.edu](http://www.ehs.berkeley.edu) or 642-3073.

Virtually all laboratories have some quantities of hazardous materials stored and used on a regular basis. There are a number of required procedures relating to the use of these materials on campus that serve to make their use safer. A quick reference to the following requirements is found in the "Chemical Hygiene Plan" (CHP) template, a yellow-edged flipchart provided in section eight of this manual. A copy should be filled in and posted prominently in each laboratory to provide specific information to the occupants of the laboratory. The CHP should be updated annually and the person doing the update should initial and date the annual update section of the "responsibilities and contact" page to indicate that it has been checked. Additional copies of the template are available from the LSO or EH&S. Check to see if a template for your area has been completed already and contains the information referred to above. In addition, each laboratory is required to have written safety procedures for all protocols involving hazardous materials or processes. Be sure you are familiar with this information as well. Your supervisor or departmental safety committee representative can tell you where to find this material.

### PERSONAL SAFETY

1. Smoking is not allowed in any indoor areas on campus.
2. Wear safety glasses or face shields when working with hazardous materials and/or equipment.
3. Wear gloves when using any hazardous or toxic agent. *These should be removed before leaving the lab, using phones, opening refrigerators, or entering common areas.*
4. Use of chemical and fire resistant laboratory coats is recommended. Shorts and sandals should *not* be worn in the laboratory.
5. Do not use any equipment unless you are trained and approved as a user by your supervisor.
6. Pregnant women should take special care with exposure to radiation and certain chemicals which can be harmful to fetal development. Call EH&S at 2-3073 for further information or contact your physician.
7. Wash hands before leaving the lab and before eating.
8. Tie back medium-length and long hair when working near flames or entangling equipment.
9. If leaving a lab unattended, turn off all burners and lock the doors.
10. Working alone in laboratories is not recommended. If you must work alone, notify someone of your location.
11. Never mouth pipette.

### GENERAL LABORATORY SAFETY

1. Maintain aisles at least 28" wide and keep them clear.
2. Maintain unobstructed access to all exits, fire extinguishers, electrical panels, emergency showers, and eye-washes.
3. Do not use corridors for storage or work areas.
4. Make sure all cabinets, bookcases, etc., taller than 42" are anchored.
5. Shelves 48" or higher and all shelves with chemicals should have restraining straps or lips.
6. All highly toxic materials should be stored in secondary containers to avoid hazardous leaks (when purchasing new supplies of toxic materials, request safety containers whenever possible.)
7. Do not store heavy items above table height. Any overhead storage of supplies on top of cabinets should be limited to lightweight items only. *Also, remember that a 36" diameter area around all fire sprinkler heads must be kept clear at all times.*
8. Spills should be cleaned up immediately. A cart equipped with clean-up supplies is located in the corridor outside 301 LSA and in 114 NAF.

9. Areas containing biohazards, radioisotopes, and carcinogens should be posted accordingly. However, do not post areas unnecessarily and be sure that signs are removed when hazards are no longer present.
10. Post shut-down instructions next to any piece of equipment that may run unattended. List clear instructions and name and phone numbers of person to contact regarding that piece of equipment in an emergency.
11. Make sure all chemical reagents are clearly and currently labeled with substance name, concentration, date, and name of responsible individual. All chemicals dispensed to temporary containers should be labeled with the chemical name and primary hazard, if left unattended for any length of time.
12. When leaving a research group, review all solutions you have made and either dispose of them or assign them to another member of the laboratory. The name on the label should reflect this change.
13. Tag all electrical outlets with breaker box number and switch number.
14. Avoid using extension cords whenever possible. If you must use one, get a heavy-duty one that is electrically grounded, preferably with its own fuse, and install it safely. Extension cords should not go under doors, across aisles, or be hung from the ceiling.
15. Use volatile and flammable compounds only in a fume hood. Procedures that produce aerosols should be performed in a hood to prevent inhalation of hazardous materials.
16. To avoid hazardous spills, use plastic carriers when transporting bottles of dangerous chemicals (such as acids) through corridors.
17. Gas burners and hot plates should never be left unattended when in use.
18. For safety reasons, waste containers should be emptied on a daily basis. If this is not done, notify the Building Coordinator.

## STORAGE

1. Arrange storage by chemical compatibility. (Do not use traditional A-B-C method.) Store strong acids and bases away from organic compounds, and segregate incompatible chemicals. Useful information on chemical compatibility can be found in Dangerous Properties of Industrial Materials, by N.I. Sax (copy available in 203 NAF), the Merck Index, and the Aldrich Chemical Catalogue. EH&S also provides guidance in the document "Safe Storage of Chemicals" available at ehs.berkeley.edu.
2. Secure all pressurized containers (e.g., CO<sub>2</sub> tanks) using two chains. Install restraining lips on shelves.
3. Date chemicals at time of purchase, and make sure all containers are properly labeled.
4. Maintain up-to-date inventory records for radioisotopes, carcinogens, chemicals, and any biohazardous substances. State law requires that the University maintain a complete chemical inventory as part of a Hazardous Materials Management Program. All facilities must submit a chemical inventory to EH&S and update it annually.
5. Do not store food in laboratories, or in refrigerators or cold-rooms containing dangerous substances such as radioactive compounds, etc.
6. In areas where combustibles are used and stored, remove all open flame devices and use grounded electrical devices in good service condition.
7. Use only metal or approved containers to store combustible waste. A list of containers approved by the State Fire Marshal is available from EH&S (2-3073).
8. The NAF has specific requirements as described in section of chemical storage (5 pages ahead).

## WASTE DISPOSAL

There are restrictions on what may be put in public landfill or poured down the drain. Be aware of the various policies cited below and THINK before you dispose of anything.

### MEDICAL WASTE DISPOSAL

Everything defined as "medical waste" must be taken to room 638 LSA, or 205E (cold room) for disposal. This cold room has been designated as a medical waste accumulation site. The following is considered medical waste:

- any waste containing "INFECTIOUS AGENTS" with evidence of human pathogenicity including all waste from the Biohazard Containment Facility e.g., arthropods, bacteria, fungi, helminthes, prions, protozoa and viruses);
- all SHARPS WASTE (i.e., all scalpels, razor blades, syringes and syringe needles, AND any glass or sharp devices which are contaminated with infectious or biohazardous waste);
- any fluid HUMAN BLOOD and blood products; all human anatomical remains.
- all animal carcasses and tissues.

Medical waste must be packaged in red "BIOHAZARD" bags, autoclaved if appropriate, and taken to 161 LSA, 638 LSA or 205E NAF. For more information, see the EH&S memo dated 9/91 regarding medical waste disposal at the end of this section. Refer to the EH&S fact sheet on medical waste at [ehs.berkeley.edu](http://ehs.berkeley.edu).

The red biohazard bag should be kept in a rigid container with orange biohazard symbol stickers on the top and all four sides at all times, even during transport to the 205E waste disposal area. Also, after depositing your red bag or medical waste into a red barrel in the disposal area, secure the lid of the barrel tightly.

### DRAIN DISPOSAL

CAMPUS POLICY PROHIBITS THE DRAIN DISPOSAL OF HAZARDOUS WASTES OR ANY MATERIAL CAUSING VIOLATION OF EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD) WASTEWATER DISCHARGE PERMIT LIMITATIONS. All hazardous and chemical wastes must be packaged for pickup and disposal by EH&S. Absolutely no carcinogenic, hazardous, or biohazardous waste is to go down the drain. A waste is considered hazardous if it is flammable, corrosive, reactive, toxic, or contains heavy metals. Failure to comply with EBMUD requirements for campus drain disposal can lead to substantial fines or restrictions on laboratory water use. See the EH&S web-site's "Interim Guidelines for Drain Disposal or Chemicals".

(For more details: [www.ehs.berkeley.edu/whatwedo/airwater/draindispels.html](http://www.ehs.berkeley.edu/whatwedo/airwater/draindispels.html))

### EXAMPLES OF:

WHAT CANNOT GO DOWN THE DRAIN :	WHAT CAN GO DOWN THE DRAIN :
<ul style="list-style-type: none"> <li>-- solutions containing any heavy metals</li> <li>-- poisons</li> <li>-- organic solvents</li> <li>-- strong acids and bases</li> <li>-- photographic fixer*</li> <li>-- chromic acid/sulfuric acid glass washing solutions.</li> <li>-- waste paint and paint thinner</li> <li>-- motor oil</li> <li>-- methanol</li> <li>-- radioactive waste</li> </ul> <p><i>(Exception: some low-level liquid radioactive waste may be disposed of by drain if specifically allowed on the lab's RUA.)</i></p>	<ul style="list-style-type: none"> <li>-- sugar and non-hazardous protein solutions</li> <li>-- liquid detergents</li> <li>-- SOME DILUTE ACIDS AND BASES, (pH&lt;10 or pH&gt;5.5)</li> <li>-- liquid <u>nonmedical</u> waste which has been neutralized/decontaminated with bleach to a final concentration of 1%</li> </ul>
<p><i>*NOTE: Photo fixer is not allowed down the drain because it contains silver; however, photo developer <u>can</u> go down the drain if the pH is not too basic (i.e., pH must be less than 10).</i></p>	

### BUILDING TRASH

Only non-hazardous materials are allowed in building trash containers. Disposal of hazardous chemicals or medical waste in the building trash is strictly prohibited. Absolutely no bags or containers which are labeled MEDICAL WASTE, BIOHAZARD, INFECTIOUS, or SHARPS WASTE may be put in the regular building trash.

Also, many laboratory chemicals which you may consider non-hazardous are in fact regulated by the EPA or the California Department of Health Services and are considered hazardous by them. Therefore, unless you are absolutely sure that a chemical is not classified as hazardous, do not put it into the building trash. Package it for pickup and hazard determination by EH&S, or consult EH&S before putting it into the trash.

WHAT CAN GO INTO BUILDING TRASH	WHAT MUST BE PACKAGED FOR EH&S PICKUP
<ul style="list-style-type: none"> <li>-- SUGARS AND SOME SALTS</li> <li>-- POWDERED DETERGENT</li> <li>-- NON-HAZARDOUS PROTEINS</li> <li>-- SAND AND CLAY</li> <li>-- BROKEN OR WASTE GLASSWARE (put in cardboard box, tape box closed, label it "Broken Glassware", and leave for pickup by custodians)</li> <li>-- UNCONTAMINATED PLASTIC PIPETTES (seal in separate box or put in same box with broken glass; do NOT leave loose in trash)</li> <li>-- <u>NON-MEDICAL</u> WASTE <i>(must be packaged in white bags labeled "Non-Medical" and taken directly by labs to building dumpster)</i></li> </ul>	<ul style="list-style-type: none"> <li>-- all hazardous lab chemicals</li> <li>-- toner</li> <li>-- photographic chemicals</li> <li>-- pesticides</li> <li>-- paint and paint thinners</li> <li>-- waste solvents</li> <li>-- waste oil</li> <li>-- liquid paper white-out</li> <li>-- batteries</li> <li>-- mercury containing devices.</li> <li>-- hazardous household chemicals</li> <li>-- electronic waste (e.g. fluorescent tubes, monitors)</li> </ul>

## DISPOSAL PROCEDURES

How to Request EH&S Pickups for Chemical Waste: Complete an electronic Material Packing List available online at <http://mpl.ehs.berkeley.edu/>. Do not deliberately dispose of liquid chemical waste by evaporating in a fume hood.

Biotechnology/Biological Waste: Solid biotechnical waste which is not defined as "medical" must be put in white bags specifically labeled "NON-MEDICA" and taken directly to the building dumpster. (Custodians will not pick up these bags.)

Animal Waste: Animal waste must be bagged to prevent leakage and discarded in the medical waste barrels located in one of the cold rooms provided by OLAC. See EH&S "Guidelines for Medical Waste" at [ehs@berkeley.edu](mailto:ehs@berkeley.edu).

Radioactive Waste: Follow procedures as outlined in your approved Radiological Use Authorization (RUA) or contact EH&S (2-3073) for guidance.

Guidelines for Disposal of Chemical Waste (Non-Radioactive): Separate chemical waste by compatibility. Only compatible chemicals should be packaged together. Extremely hazardous chemicals, such as potential explosives, should not be packaged with other chemical waste. (Some of the most common explosive compounds are peroxides and peroxide formers, such as old ethers.) To dispose of these, make special arrangements with EH&S.

- Chemicals should be packaged in a sturdy box with a top that can be closed and sealed. Several small boxes are preferable to one large, unwieldy box. Drums and cans are acceptable if they are properly sealed and in good condition.
- All contents must be cushioned thoroughly so that breakage does not occur. For this reason, plastic bottles are preferable to glass bottles. If glass bottles must be disposed of, cushion them with plenty of newspaper, packing material or corrugated separators.
- Do NOT use bottles with glass, rubber, or cork stoppers. There is too much risk of leakage in transit. Transfer all liquids to screw-top bottles and make sure the top is tightly closed.
- Dry chemical waste must be thoroughly contained: first, in a primary container (such as a plastic bag or its original can or box), and secondly, inside a larger box or drum in which it will be transported.
- No broken or leaking bottles, cans, or packages are acceptable.
- Each box or container of waste must be labeled with a "Material Packing List," listing the contents and their approximate quantities. Additional notes concerning age or unusual condition of contents are also helpful.
- When disposing of unknown or unlabelled compounds, be careful of potential dangers. Separate unidentified waste, and consult with the waste pickup person. Never evaporate liquid chemicals in a fume hood as a means of disposal.

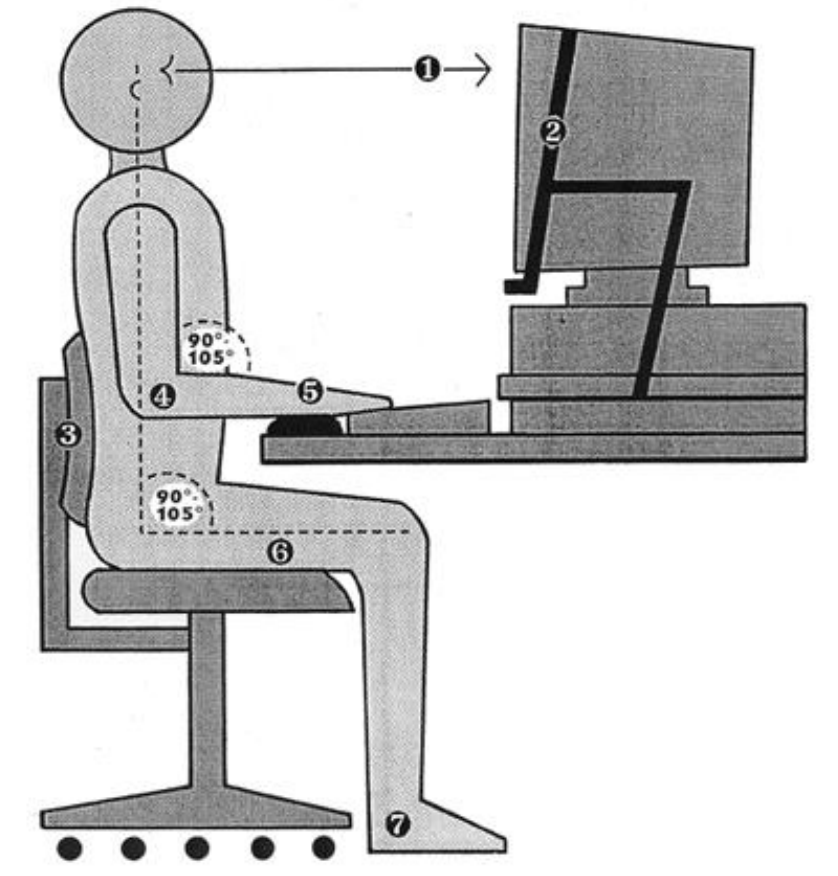
Glass Disposal: All glass (e.g., broken glass, unwanted glassware, empty bottles) must be collected in a separate container, sealed securely, and labeled "GLASS ONLY". Refer to empty container fact sheet at [ehs.berkeley.edu](http://ehs.berkeley.edu).

Hypodermic and Syringe Needles: Hypodermic or syringe needles and other sharps must be collected in an approved sharps container. Leave needles intact; do not clip or recap. Dispose of entire container as medical waste in the 205E cold room. See Sharps Fact Sheet for more information [ehs.berkeley.edu](http://ehs.berkeley.edu). If re-capping of a needle is required, a one-handed technique must be used.

Gaseous Waste: Be cautious with gaseous wastes. If not noxious or hazardous, release them in an operating fume hood. If waste is hazardous, contact EH&S (2-3073). Waste anesthetic gas (e.g. isoflurane) should be exhausted in a fume hood or through a maintained scavenging filter. Contact the NAF LSO at 3-5809 for an evaluation if you do not have a fume hood available, use isoflurane for long durations, are working in a poorly-ventilated room, or have other concerns about exposure to waste anesthetic gas.

## A USER FRIENDLY WORKSTATION

- Top of screen at eye level; lower for bifocal wearers.
- Screen distance at arms' length (15-32").
- Document holder adjustable to screen height.
- Chair backrest provides firm lower back support.
- Chair back and seat easily adjustable for height and tilt by user.
- Keyboard height promotes relaxed arms with forearms parallel to the floor.
- Wrists straight (neutral).
- Padded, movable wrist rest, same height as keyboard home row, if needed.
- Thighs parallel to floor.
- Ample legroom under work surface.
- Feet rest firmly on floor or foot rest.





## V. CHEMICAL SAFETY

### CHEMICAL USE AND HANDLING

1. **MAINTAIN A CURRENT CHEMICAL INVENTORY.** Maintain up-to-date inventory records for radioisotopes, carcinogens, chemicals, and compressed gases. State law requires that the University must have a complete chemical inventory as part of its Hazardous Materials Management Program, which must include inventories from all users of such materials. Therefore, all laboratories must submit a complete chemical inventory to EH&S when work begins in the NAF and update it annually. Software for maintaining a computerized inventory is also available from EH&S. Refer to the EH&S Chemical Inventory Fact Sheet at the end of this section for details.
2. **SPECIAL PRECAUTIONS NEED TO BE CONSIDERED FOR PARTICULARLY HAZARDOUS SUBSTANCES.** These substances are listed under the "Standard Operating Procedures" section of the "Chemical Hygiene Plan" template or may be identified in your animal use protocol. Precautions are: posted warnings of their use in a laboratory area; required use of fume hoods or glove boxes; written procedures for safe removal of contaminated wastes; and written decontamination procedures.
3. **THE INJURY AND ILLNESS PREVENTION PROGRAM REQUIRES THAT HAZARD INFORMATION BE COMMUNICATED TO ALL PERSONNEL.** This communication includes proper labeling of containers, written protocols for use of hazardous materials in laboratories, maintaining a current chemical inventory, and the availability of Material Safety Data Sheets (MSDS) for the hazardous materials used in each laboratory. Please refer to the EH&S Fact Sheet "Hazard Communication", located in this section, for additional information. Section 10 of this manual is reserved for the laboratory - specific MSDS'; it is recommended that copies be kept there. If you do not receive MSDS' directly from the manufacturer with your chemicals, you may obtain or view MSDS' at [ucmsds.com](http://ucmsds.com) from any campus computer.

### CHEMICAL STORAGE

1. **ARRANGE STORAGE ACCORDING TO CHEMICAL COMPATIBILITY.** Do not use the traditional alphabetical method, except within each storage category. Store strong acids and bases away from each other and organic compounds, and segregate incompatible chemicals such as flammable liquids and oxidizers. It is possible to store flammable liquids, corrosives, oxidizers and poisons in one cabinet, but only if they are segregated into chemically resistant tubs of sufficient volume to completely hold the contents of the largest container if it should break. The chemicals should be kept on the shelves in the following order: flammables, corrosives, oxidizers and poisons. However, it is strongly recommended that flammable liquids and corrosives be stored in separate, marked cabinets, and that acids and bases should be separated by secondary containment tubs within the corrosives cabinet. Useful information on chemical compatibility can be found in Dangerous Properties of Industrial Materials, by N.I. Sax, the Merck Index, and many of the commercial chemical catalogs such as Fisher Scientific or Aldrich (reference copies available in the NAF Conference Room). You can also refer to the hazard information in the Chemical Inventory Program and the EH&S document "Safe Storage of Chemicals" available at [ehs.berkeley.edu](http://ehs.berkeley.edu).
2. **ENSURE COMPLIANCE WITH FIRE REGULATIONS CONCERNING QUANTITIES, APPROVED CONTAINERS, APPROVED CABINETS, PROPER LABELING, ETC.** If uncertain about regulations, contact the LSO. The NAF has special limits on flammable liquid storage. No more than 2 gallons of flammable liquids and 2 gallons of corrosives may be stored outside of an appropriate flammable storage cabinet in any one room in the NAF, as described in the Mitigation Monitoring Program for the building.

3. SECURE ALL PRESSURIZED CONTAINERS (E.G., TANKS OF COMPRESSED GAS); AND INSTALL RESTRAINING LIPS ON SHELVES. Gas cylinders need to be secured at two points, approximately at 1/3 and 2/3 of the cylinder height using metal, not fabric straps (chains are OK). Bench clamps for cylinders are not acceptable because of their high failure rate during earthquakes.
4. DATE CHEMICALS AT TIME OF PURCHASE, AND MAKE SURE ALL CONTAINERS ARE LABELED PROPERLY. A general rule of thumb for labeling is: if it shouldn't be drain-disposed, these rules apply (see EH&S Fact Sheet "Interim Guidelines for Drain Disposal of Chemicals" in this section). The original container label (provided by the manufacturer) must have: the name of the hazardous substance(s); name and address of manufacturer or importer; and specific warning statements identifying the kinds of the chemical and/or physical hazards, routes of entry, and emergency treatment in case of accidental contact. Secondary or transfer containers (containing working solutions, preps etc.) should have the complete chemical names of all hazardous components in indelible ink. The container should also indicate a hazard warning or some other specific identifier to describe the hazard (e.g. corrosive).
5. DO NOT STORE FOOD IN LABORATORIES, OR IN REFRIGERATORS OR COLD ROOMS CONTAINING DANGEROUS SUBSTANCES SUCH AS RADIOACTIVE COMPOUNDS, ETC. No food or drink is allowed on the lower level of the NAF, except in room 102 & 114 or specified areas marked as (clean areas). There is a lunchroom on the upper level in room 202, available to all users of the NAF.

## **CHEMICAL SPILL PROCEDURES**

REFER TO THE "WHO TO CALL WHEN A SPILL HAPPENS" PAGE AT THE END OF THE SECTION

A SPILL CART IS LOCATED IN ROOM 114.

- 1) ALERT PEOPLE IN THE IMMEDIATE AREA OF THE SPILL.
- 2) IF YOU HAVE BEEN TRAINED AND THE SPILL IS SMALL, WEAR PROTECTIVE EQUIPMENT, INCLUDING SAFETY GOGGLES, IMPERMEABLE GLOVES AND LONG-SLEEVED LABORATORY COAT, AND PREPARE TO CLEAN IT UP.
- 3) AVOID BREATHING FUMES OR VAPORS. Call EH&S if you do not have the appropriate personal protective equipment or are not trained to clean-up the spill safely (2-3703).
- 4) ABSORB SPILL WITH A SUITABLE MATERIAL. Collect residue, place in container, label and dispose of via the Campus Hazardous Substance Disposal Program. Take special precautions to prevent spilled materials from reaching the floor or sink drains.
- 5) CLEAN SPILL AREA WITH A PAD OR TOWELS SOAKED WITH SOAP AND WATER AS A FINAL DECONTAMINATION PROCEDURE.

Call EH&S (2-3073) for assistance and advice on spills of suspected hazardous materials or spills of any quantity involving materials on the following list:

- carcinogens and mutagenic materials
- radioisotopes
- biohazardous materials
- highly toxic chemicals
- concentrated acids and bases

6) ADDITIONAL INFORMATION REGARDING SPILL CLEANUP PROCEDURES CAN BE FOUND IN THE EMERGENCY PROCEDURES SECTION OF THE CHEMICAL HYGEINE PLAN FLIP CHART, LOCATED IN SECTION EIGHT OF THIS MANUAL. This flipchart should also contain specific procedures for handling materials used in your laboratory. A copy should be filled out and posted in each laboratory, especially if special procedures need to be followed, and all workers should be familiar with its contents.

In the event of a MAJOR spill, or one involving extremely hazardous materials, evacuate the building immediately. If the material is flammable, turn off ignition and heat sources. Close doors to the affected area and post with danger signs. Pull the fire alarm, dial 911 and give exact location and nature of spill. Have someone knowledgeable about the incident available to provide information to emergency personnel. If you are unfamiliar with the toxicity of the spilled substance, contact your supervisor or EH&S (2-3073). A Chemical Spill cart equipped with clean-up supplies is available in room 114 NAF.

## CHEMICAL DISPOSAL

Please refer to the EH&S Fact sheets "Unwanted Hazardous Chemicals" and "Chemical Waste Recharge" at the end of this section or on the EH&S web-site at [www.ehs.berkeley.edu](http://www.ehs.berkeley.edu). Detailed packing, labeling and manifesting (packing list) instructions are provided.

Also, in compliance with the laws governing hazardous waste generation, the campus has implemented a waste minimization program. Information on the program is located at the EH&S web-site at the following locations:

"Minimizing Hazardous Waste"

(<http://www.ehs.berkeley.edu/pubs/factsheets/13wastemin.pdf>)

"Chemical Exchange (CHEX)"

(<http://www.ehs.berkeley.edu/pubs/factsheets/10chex.pdf>)

"Guidelines for Explosive & Potentially Explosive Chemicals Safe Storage"

(<http://www.ehs.berkeley.edu/pubs/guidelines/pecguidelines.pdf>)

"Guidelines for Drain Disposal of Chemicals at The University of California, Berkeley"

(<http://www.ehs.berkeley.edu/pubs/guidelines/draindisposal.pdf>)

## VI. TRAINING

One of the key requirements for using the Northwest Animal Facility is that each individual must be adequately trained in the safety and health issues that affect their work, and that this training is documented. There are three specific training sessions that personnel may need to attend if the topics covered apply to their work. Everyone must attend the “NAF Basic Safety” session. Attending the “Hazardous Materials Safety” and “Biohazard Containment Facility (BCF) safety” sessions will depend upon the work being done in the NAF. In addition, the "Record of Employee Training and Personal Emergency Information" must be completed and turned in to the Laboratory Safety Officer (usually at the Basic Safety session), who maintains an up-to-date record of the level of training of all NAF users, both for review by inspection agencies and as a means of reminding people when they are due to take refresher sessions.

**The training requirement is subject to enforcement by the LSO and the Director of OLAC. Please be sure you read the “New Policy Regarding Failure to Attend Mandatory NAF Training Sessions” at the end of this section for details.**

Legal requirements involving training not only dictate that the training be attended, but that for many topics personnel must attend annual refresher or update sessions. The Basic Safety Training (for all occupants), Hazardous Materials Safety and BCF Safety sessions need to be repeated every year (by those to whom the information applies). Annual refresher trainings are now available online for all NAF users that have already completed the initial classroom training. These online refresher courses may be access via the Campus Learning Management System. Directions are posted at <http://www.ehs.berkeley.edu/training/lms.html>. If you have any problems or questions regarding the online training, contact the LSO at 849-7142. In addition, each supervisor should provide new laboratory personnel training about the hazardous materials and/or procedures used in their work, e.g. on written SOPs or unique equipment. This specialized training should be documented; the Safety Training Record Form is available at <http://www.ehs.berkeley.edu/iipp/formdirectory.>; . The work-specific training only needs to be updated if new hazards are introduced. EH&S also provides safety training on a number of topics as listed on the “Office of Environment, Health and Safety” website.

## FACILITY INSPECTIONS

Every year laboratory self-inspections are required. A form should be provided by your department safety coordinator. These forms are also available via the EH&S website at <http://www.ehs.berkeley.edu/iipp/formdirectory>.

## **POLICY REGARDING FAILURE TO ATTEND MANDATORY NAF TRAINING SESSIONS**

February 26, 2003

TO: All Users of the Northwest Animal Facility

FROM: Helen Diggs, Director, Office of Laboratory Animal Care

RE: Policy Regarding Failure to Attend Mandatory NAF Training Sessions

One of the requirements of the Northwest Animal Facility (NAF) Mitigation Monitoring Program (MMP) is that all users of the NAF receive "employee and personnel emergency response training..." and "...regular training in the use and application of the program." [Measure 4.11-1]. Similar language exists in other Mitigation Measures, specifically requiring training on emergency procedures and chemical hazards. These measures are a legal agreement between the University of California, Berkeley and former litigants, i.e., City of Berkeley and In Defense of Animals. Failure to comply with these measures places the University at risk of further legal action.

Most users of the NAF comply with these requirements by attending the training sessions provided by EH&S and the Office of Laboratory Animal Care (OLAC). These sessions are as brief as possible while adequately addressing the requirements. In spite of repeated notification, some users fail to attend either initial or required refresher training.

The following policy has been developed to ensure the University's compliance with the Mitigation Monitoring Program. This policy applies to all NAF users regardless of University status.

- 1) It is the responsibility of the principal investigator (PI) to distribute training notifications promptly to all of their staff (employees and students) who use the NAF, and to assure that their staff attend all required initial and refresher training. Designation of required training (Basic Safety, Hazardous Materials Safety, and Biohazard Containment Facility Safety) is identified by evaluating the work performed in the NAF by each PI, and applies equally to all persons who work for the PI.
- 2) It is the responsibility of the PI to inform new personnel of these training requirements, and to inform Elizabeth Ignacio, the Laboratory Safety Officer, that these new staff will need training. The PI may designate a laboratory safety contact to receive the notifications. The PI must identify that person to the Laboratory Safety Officer, in writing, and request that the notices be sent directly to the laboratory safety contact. It is also the PI's responsibility to inform the Laboratory Safety Officer at least one month in advance if that designation is to be transferred to another person.
- 3) It is the responsibility of OLAC personnel to provide the Laboratory Safety Officer with a copy of each completed keycard or key code request form within two (2) working days of its receipt by OLAC. It is the responsibility of the Laboratory Safety Officer to keep the training database current to ensure that appropriate notifications are sent.
- 4) It is the responsibility of the Laboratory Safety Officer to send out the training requirements and scheduled training dates to each PI or laboratory safety contact no less than two weeks prior to the

scheduled training. Notification for each type of required annual refresher training begins eleven months after completion of a previous session of that type.

5) After three consecutive notifications, any person who fails to receive the needed training will be denied access to the NAF by cancellation of keycard or key code until the required training has been documented. Any person found lending a keycard to such a person or assisting them in avoiding compliance will immediately lose access to the NAF. Re-instatement will be subject to a conference between the barred individual(s), their PI, the Laboratory Safety Officer, and the Director of OLAC. All costs associated with these actions will be borne by the PI. Repeated failures to keep training current may result in the permanent loss of NAF access privileges. Security breaches and other safety related issues may be brought to the attention of the NAF Building Safety Committee.

Questions regarding this policy may be directed to either Dr. Helen Diggs at 642-9232, or Sara Souza at 643-5809.

cc: Quig Driver, Management Services Officer-Office of Laboratory Animal Care  
Mark Freiberg, Director-Environment, Health & Safety  
\*Sara Souza, Laboratory Safety Officer-Northwest Animal Facility  
\*Brandon De Francisci, Acting Manager, Health & Safety

## VII. BIOHAZARD CONTAINMENT FACILITY (BCF)

The Biohazard Containment Facility (BCF) within the Northwest Animal Facility is a shared - use, multi - disciplinary facility for the containment of biohazardous materials used in research requiring laboratory animals. Because of the limited space available, investigators will need to coordinate space and resource used in order to most efficiently conduct their research. As part of the campus Injury and Illness Prevention Program, facility inspections and documentation review will be a part of the normal BCF operations. While laboratory inspections will often be “self-inspections” (see forms in section 8), the Laboratory Safety Officer (LSO) will review procedures, facilities, equipment and record-keeping periodically to assist with individual compliance efforts, and will be available to answer questions or help solve problems relating to these or other EH&S-related concerns. The LSO inspections will be scheduled in advance, and every reasonable effort will be made not to interfere with ongoing work. Each investigator is required to have written safety procedures for the handling of biohazardous materials and processes used in their protocols. Because use of biohazardous materials requires prior approval by The Committee on Laboratory and Environmental Biosafety (CLEB), CLEB and possibly the NAF Building Safety Committee, will review these procedures prior to implementation. Once reviewed, the procedures shall be kept within the appropriate laboratories for easy reference. The Building Safety Committee will only address questions relating to the ability of the facility to safely support these procedures, which may need to be re-evaluated when any new hazards are added. A subcommittee of CLEB members will inspect BCF periodically to ensure proper operation.

To gain access to BCF, you need to work for one of the investigators who has been assigned space within the facility and have documentation for training in the procedures specific to that laboratory in regard to safe handling of hazardous biological agents. A specially coded keycard that will operate the airlock will then be issued. Anyone not meeting these requirements will not be allowed into the facility. Visitors and service personnel must be accompanied by either the PI, laboratory supervisor for the facility, LSO, or Director of OLAC, and all visitors must log into and out of the facility in the logbook provided at the security guard’s desk. All visitors must also sign a form “ADVISORY REGARDING SAFE ENTRY INTO THE NORTHWEST ANIMAL FACILITY BIOHAZARD CONTAINMENT AREA” ensuring that they are aware of the special hazards present in the BCF. A copy is provided in the Biohazard Containment Facility Safety and Operations Manual.

The facility is designed to prevent the release of hazardous materials into the environment by using a number of passive and active barriers, as specified in the NIH description of BL-3 level containment. These include constant negative pressure, extensive use of HEPA filters, facilities for dress-in and dress-out, special waste-handling procedures, and a special drain isolation system to be activated in case of an accidental release of any hazardous material. A map of the facility is provided at the end of the section\*, as are EH&S Help Sheets on “Handling and Disposing of Sharps” (<http://www.ehs.berkeley.edu/pubs/helpsheets/07sharps.pdf>) and “Guidelines for Managing and Disposing of Medical Waste”.

**FOR FURTHER INFORMATION REGARDING THE USE OF THE NAF BCF, PLEASE REFER TO THE SEPARATE BCF SAFETY MANUAL.**

\* Maps are not available within the on-line version of this document.