



NEW LABORATORY WORKER Health and Safety Orientation

Prior to beginning work in any UCSC laboratory you must complete the following:

- I. Read and understand the contents of this New Laboratory Worker Orientation Packet.
- II. Receive training on the specific laboratory safety requirements and procedures for your laboratory.
- III. Provide written certification to your laboratory supervisor that you have completed all steps required by this new lab worker orientation.

I. New Laboratory Worker Orientation Packet Contents

- Injury Illness and Prevention Programs, An Introduction to the Laboratory Chemical Hygiene Plan
- Fundamental Laboratory Safety, General Procedures A-Z
- Emergency Contact Information
- Emergency Response Procedures
- Personal Protective Equipment Requirements
- Safety Shower and Eye Wash Stations
- Fume Hood Work Practices
- Hazardous Waste Disposal Guidelines

II. Laboratory Specific Policies and Procedures

1. **Safety Documents:** Be familiar with the contents and know the location of the following documents.
 - Laboratory Specific Chemical Hygiene Plan
 - Cal-OSHA Lab Standard
 - UCSC Injury and Illness Prevention Program
2. **Emergency Response Procedures:** Review the location and use of these emergency response items.
 - Safety Shower and Eye Wash Station
 - Fire Alarm Pull Station
 - Fire Extinguisher
 - Building Evacuation Routes and Congregation Points
 - What You Should Do In The Event of a Chemical Spill
3. **Laboratory Health and Safety Resources:** Know who to contact and how to obtain health and safety information.
 - Laboratory Safety Contacts
 - Material Safety Data Sheets or Other Hazard Information References
 - Laboratory Specific Standard Operating Procedures
4. **Personal Protective Equipment / Engineering Controls:** Review lab specific policies and know the proper operating procedures and limitations of Engineering Controls.
 - Laboratory Personal Protective Equipment Policy
 - Fume Hoods, Biosafety Cabinets, other Local Exhaust Ventilation
5. **Hazardous Waste:** Review procedures for handling, storage, segregation, and packaging of hazardous waste.

III. Laboratory Worker Signature

I certify I have been provided with and understand the information in the New Laboratory Worker Orientation Packet. I understand I am responsible for adhering to all safety laws, rules, and regulations while working at UCSC.

Printed Name

Signature

Date

Injury and Illness Prevention Programs
An Introduction To
THE LABORATORY CHEMICAL HYGIENE PLAN

What is a Laboratory Chemical Hygiene Plan?

A Chemical Hygiene Plan (CHP) is a written description of laboratory policies and procedures designed to ensure all work activities are carried out safely and in a manner consistent with laws required by the California Occupational Safety and Health Administration (Cal-OSHA). The Cal-OSHA regulation covering laboratory safety is entitled "Occupational Exposure to Hazardous Chemicals in Laboratories" (California Code of Regulations, Title 8, Section 5191), and is often referred to as the "Lab Standard". Cal-OSHA developed the standard to protect employees from hazards associated with chemicals in laboratories. The CHP is considered part of the Campus Injury and Illness Prevention Program.

Who does the law cover?

The law covers University employees in all job classifications working in laboratories. These classifications include academic and administrative staff. Safety requirements and knowledge of the Chemical Hygiene Plan also apply to students working in laboratories.

What is your role?

Everyone has a role in laboratory health and safety. A safe lab requires a partnership of commitment and cooperation between you and your fellow workers, supervisors and the University. As a worker in a laboratory, you have an obligation to work in a safe, responsible manner and in accordance with the safety training you receive. You also need to inform your supervisor about hazards observed in the workplace and be familiar with your laboratories Chemical Hygiene Plan.

What are your responsibilities for Lab Standard Compliance?

- Become familiar with the Lab Standard contents and read through your Lab's Chemical Hygiene Plan.
- Know the potential health and safety hazards of your work activities and how to protect yourself.
- Know how to report unsafe conditions and don't undertake a job that appears unsafe.
- Understand measures for minimizing exposures. These can include following safe work practices, using engineering controls (such as hoods, glove boxes) and personal protective equipment (such as gloves, safety glasses and respiratory protection).
- Report any work-related injury or illness to your supervisor.
- Know what to do in an emergency and be familiar with emergency response equipment such as safety shower eyewash stations, fire extinguishers and spill kits.

How to get more information.

The written plan covering specific health and safety issues is kept on file by your lab supervisor. Your **supervisor** will make the plan available for review and will answer your questions or help find answers to questions about workplace health and safety. Another valuable resource available to you is the campus **Environmental Health & Safety Office**. (459-2553 or <http://ehs.ucsc.edu>)

FUNDAMENTALS OF LABORATORY SAFETY

General Procedures A-Z

Laboratories are inherently hazardous therefore you should respect and understand the safety and health hazards associated with your specific laboratory activities. Familiarize yourself with and follow these campus policies and operating procedures on general safety at ALL times:

1. 911 - Emergency Response.

For any emergency i.e. medical, fire, chemical spill call 911. When 911 is dialed on the UCSC Campus you will connect to our Campus Dispatch. Stay on the line until you are told you can hang-up. The UCSC Fire Department is the emergency first responder.

2. Chemical Spills.

If a toxic/hazardous chemical has made contact with the skin, start flushing the area with water immediately. If emergency assistance is required, call 911. You may also directly contact EH&S (459-2553) for assistance but may get no answer. In this case, call 911.

Spill preparedness - Before working with chemicals, assess potential spill hazards. Each laboratory worker should be familiar with general spill response procedures. Written protocols should be developed when extremely hazardous or large quantities of chemicals are used.

3. Chemical Waste Disposal.

All hazardous waste materials must be disposed of through EH&S. No hazardous materials are permitted down the drain, allowed to evaporate in the hood, or thrown into the general trash. Questions about chemical waste management should be directed to EH&S 459-2553. Requests for collection of chemical waste must be submitted in writing on UCSC Chemical Waste Pickup forms.

4. Children and Unauthorized Persons.

Children and other unauthorized persons should not be in laboratories where hazardous materials or hazardous equipment are being used.

5. Electrical.

Two-wire type extension cords should not be used. Cords should not run in aisles or corridors where they might be damaged or create a tripping hazard. Cords should not be run through doors, walls or partitions, under rugs, or above dropped ceilings. They should not be wrapped around fixtures, tied in knots, or draped over pipes, lights, or ventilation ductwork.

Access to electrical equipment (e.g. plugs, switches and electrical panels) should be maintained free from obstructions to allow immediate access in an emergency.

6. Emergency Eye Wash/Safety Showers (SS/EW).

Identify the location of the closest SS/EW before you begin work in a laboratory. Be certain safety showers/emergency eyewashes are not blocked. Do not handle corrosive materials unless there is a SS/EW station within 10 seconds travel distance.

7. Equipment.

Always use the appropriate type of equipment for the task and ensure it is in good condition. For example, never use chipped or cracked glassware.

8. Fire Extinguishers -- Fire Alarm Pull Stations.

Fire extinguishers are available at locations throughout each science building. Identify the extinguisher and fire alarm pull station closest to your work location. Always activate the pull station (this automatically summons the fire department) before you try to use the fire extinguisher.

9. Food, Drink, Cosmetics.

Eating, drinking, chewing gum, smoking and the application of cosmetics are forbidden in areas where hazardous chemicals and radioactive materials are used. Such activities should be done only in well-defined, designated non-chemical areas. Do not store food in the same refrigerator with chemicals, biohazards or radioactive materials.

10. Fumehoods.

- Always ensure hood is operating prior to use. Check the "tell-tail" on the hood sash to make sure it is being drawn inward and observe air flow metering devices (air velocity or magnehelic gauge) as an indicator the hood is sucking air.
- Conduct all work and keep all apparatus at least 6 inches back from the face of the hood. A stripe on the bench surface is a good reminder.
- Keep the hood sash closed as much as possible.
- Keep hood slots and baffles free of obstruction by apparatus or containers.
- Do not put your head in the hood when contaminants are being generated.
- Any processes that may generate air contaminants at or above the TLV should be conducted inside a hood.
- Always keep laboratory doors closed.
- Do not place electrical receptacles or other spark sources inside the hood when flammable liquids or gases are present.
- Use an appropriate barricade or shield if there is a chance of explosion, implosion or other forceful, unexpected release.

11. Glass Tubing.

When inserting tubing into stoppers, lubricate tubing and wear leather gloves to protect hands from being cut in the event of the tubing slipping and breaking.

12. Handling and Storage of Chemicals.

Hazards associated with various chemicals and gases vary widely. Understanding the hazards associated with a compound and minimizing the quantity used and stored in the lab will decrease chance of injury.

13. Hazard Assessments.

Written standard operating procedures must be developed for each task involving hazardous materials or physical hazards. Tasks involving similar hazards may be grouped together on a single written procedure. Supervisors and Principal Investigators are

responsible for conducting hazard (chemical, biological, radiological, physical, etc.) assessments.

14. Horseplay.

Practical jokes or other behavior that might confuse, startle, or distract, another worker is forbidden when hazardous chemicals are present.

15. Housekeeping.

Exits, aisles and safety equipment must NOT be obstructed in any way with equipment, furniture, or other items. Laboratory aisles should have 36 inches in clear width. Work areas and floors are not to be used for excessive storage. Counter tops should be tidy and free of spilled chemicals.

16. Lab Safety Coordinator.

Each laboratory or research group should have a designated laboratory safety coordinator. The Lab Safety Coordinator should have knowledge of all safety aspects concerning lab operations. Be sure you know who this person is for your lab!

17. Mouth Pipetting.

Mouth pipetting is forbidden.

18. Personal Protective Equipment and Personal Hygiene – PPE.

Personal protective equipment and personal hygiene are basic aspects of laboratory safety. Wearing appropriate personal protective equipment and practicing good personal hygiene as described below will minimize exposures to hazardous chemicals.

- **Attire.** Wear appropriate lab attire such as a lab coat or apron; cover legs (i.e. wear long pants; no shorts or skirts) and cover feet (no sandals or open-toed shoes); confine loose clothing and long hair. Nylons and/or pantyhose are not recommended because they may melt upon contact with certain chemicals.
- **Eye protection.** It is state law and campus policy that personnel including students, staff and visitors in laboratories wear safety glasses, goggles, or face shields at all times where eye hazards are a possibility. Goggles are recommended when chemical splashes are possible. Contact lenses may be worn in the laboratory; however, they do not provide any protection for the eyes. Persons who wear contacts must use the same eye protective equipment as persons who do not wear contacts.
- **Face shields.** Full-face shields must be worn in addition to eye protection when conducting a procedure that may result in a violent reaction. Full-face shields with bottom caps to protect the neck are preferred because they provide the best protection.
- **Gloves.** Gloves are essential when working with hazardous substances. Proper gloves will prevent skin absorption, infection or burns. Glove materials vary in their effectiveness at protecting against chemical hazards. Consult a chemical resistance chart, the glove manufacturer, or contact EH&S (459-4455) for assistance in appropriate selection.
- **Personal hygiene.** Hands should be washed frequently throughout the day, after glove removal, before leaving the lab, after contact with any hazardous material, and before eating, drinking, smoking, or applying cosmetics.
- **Respiratory protection.** Always work in a fume hood or provide other local exhaust ventilation when working with materials that produce hazardous vapors or fumes. If the use of a respirator is required, you must comply with UCSC's Respirator Program, which includes a medical assessment, fit testing, and instructions on proper use. Contact EH&S (459-4455) for more information or assistance with respiratory protection concerns.

19. Signs.

Read and obey all safety warning signs for the location where you were working.

20. Unattended Experiments.

If operations involving hazardous substances are carried out with no one present, procedures need to be designed by the worker and PI to prevent the release of hazardous substances in the event of an accident (i.e. power interruption, water leak, etc.). Lights should be left on, and signs should be posted identifying the nature of the operation and the hazardous substances in use. If appropriate, arrangements should be made for other workers to periodically inspect the operation.

21. Working alone.

Working alone with hazardous materials is strongly discouraged. In unavoidable circumstances it is advisable to notify someone of your intentions, or at a minimum, maintain contact via telephone.

22. Prior Approvals.

Laboratory workers must receive prior approval from the laboratory supervisor (PI) before conducting hazardous operations in the laboratory. Prior approval is also required for the acquisition and use of toxic chemicals.

EMERGENCY CONTACT INFORMATION

A. For any emergency (fire, medical, or chemical) DIAL 911.

Dialing 911 on campus will connect you to Campus Dispatch. Stay on the line until you are told you can hang-up. The UCSC Fire Department is the emergency first responder. Campus Dispatch will contact EH&S, police, or other response personnel as required.

B. Laboratory Specific Emergency Contact Information

Laboratory safety contact phone numbers should be posted on the door and the Laboratory Chemical Hygiene flip chart. This safety contact information should include day and evening phone numbers, as well as an alternate emergency contact individual for the laboratory.

C. Environmental Health & Safety

Dial 9-2553 for assistance with chemical spill clean up or any health and safety related questions. For larger spills, injuries, or fire emergencies, always call 911 first. The EH&S office phone is not a 24 hour emergency response number.

Always call 911 first and Campus Dispatch will contact the appropriate personnel for the emergency.

D. Other Useful Contact Information

Fire Department	9-3473
Police Department	9-2231
Cowell Student Health Center	9-2211
Campus Facilities Work Order Request	9-4444
Natural Science Stock Room	9-2785

EMERGENCY RESPONSE PROCEDURES

A. Laboratory Policy on Emergency Response

All laboratory personnel, regardless of whether that person is engaged in activities involving hazardous chemicals, shall be familiar with campus emergency response procedures and trained in specific chemical spill response procedures established for this laboratory. The emergency response plan is maintained by the Laboratory Manager and is designed to:

1. Prevent or minimize injury to laboratory personnel.
2. Prevent or minimize damage to the environment and property.
3. Ensure all laboratory personnel receive instructions on:
 - a. Emergency reporting protocols.
 - b. Specific actions to be taken in the event of a spill.
 - c. Escape procedures and routes.
 - d. Critical laboratory operations.
 - e. A plan for accounting for all employees following emergency evacuation.

B. Emergency Response Guidelines

1. *CATASTROPHIC INCIDENTS*
 - a. Attend to injured or contaminated persons and remove them from any further harm.
 - b. Alert people in the immediate area to evacuate.
 - c. Call for **EMERGENCY RESPONSE 911**.
 - d. Close doors to affected area.
 - e. Have person knowledgeable of incident and laboratory assist emergency personnel.
2. *SMALL CHEMICAL SPILL*
 - a. Alert people in the immediate area of spill.
 - b. Wear protective equipment, including safety goggles, gloves and long-sleeve lab coat.
 - c. **Avoid breathing vapor or particulate material of spilled chemical.** Use an air purifying respirator only if you participate in the Campus Respiratory Protection Program.
 - d. Absorb or cover the spill with suitable materials. Collect residue, place in container and dispose of through Campus Hazardous Waste Program.
 - e. Clean spill area with soap and water for final decontamination.
3. *MAJOR CHEMICAL SPILL*
 - a. Alert people in the laboratory to evacuate.
 - b. Turn off ignition and heat sources.
 - c. Close doors to affected area.
 - d. **Call for Emergency Response: 911**
 - e. Post with danger signs and have person knowledgeable of incident and laboratory assist emergency personnel.
4. *IN CASE OF CONTAMINATION*
 - a. **Skin Contact:** flush affected areas with copious amounts of water and remove contaminated clothing immediately.
 - b. **Eye Contact:** flush eyes with water for at least 15 minutes and seek medical attention.
 - c. **Call 911 for all medical emergencies** and notify your Chemical Hygiene Coordinator about the incident

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment and personal hygiene are basic aspects of laboratory safety. Wearing appropriate personal protective equipment and practicing good personal hygiene will minimize exposures to hazardous chemicals. THESE BASIC GUIDELINES DO NOT REPLACE LAB SPECIFIC REQUIREMENTS. DEPENDING ON YOUR LABORATORIES OPERATIONS, MORE OR LESS PPE MAY BE APPROPRIATE.

A. Lab Attire

1. Wear a lab coat or apron.
2. Legs and feet must be covered. No shorts, skirts, sandals, or open toe shoes are allowed in a laboratory where hazardous chemicals are used.
3. Confine loose clothing and long hair.
4. Nylons or pantyhose are not recommended because they may melt upon contact with certain chemicals.

B. Eye Protection

1. State law and campus policy require personnel including students, staff, and visitors to wear safety glasses, goggles, or face shields at all times in laboratories where eye hazards are present.
2. Contact lenses may be worn in the laboratory, but they do not replace proper eye protection. Persons wearing contact lenses are still required to use the same eye protective equipment as individuals who do not wear contacts.
3. Wear goggles when a chemical splash is possible.
4. Wear a full-face shield in addition to eye protection when conducting a procedure that could result in a violent reaction, or when working with large quantities of a hazardous chemical.

C. Gloves

1. The proper glove will prevent skin absorption, infection or burns.
2. Change gloves frequently, especially after known or suspected contamination.
3. ONE TYPE OF GLOVES IS NOT GOOD FOR ALL MATERIALS. Choose proper gloves based on the chemical hazard.
4. Refer to chemical resistance glove charts, the manufacturer, or EH&S when choosing appropriate gloves.

D. Personal Hygiene

1. Wash hands after glove removal, before leaving lab, before eating, drinking, smoking, or applying cosmetics, and after contact with any hazardous material.

E. Respiratory protection

1. Always work in a fume hood or provide other local exhaust ventilation when working with materials that produce hazardous vapors or fumes.
2. If respirator use is required, you must comply with the UCSC Respiratory Protection Program. Contact EH&S (9-5394) for more information.

SAFETY SHOWER AND EYEWASH STATIONS

BACKGROUND

The Occupational Safety and Health Administration (OSHA) has a general requirement covered in the Medical Services and First Aid Standard (29 CFR 1910.151) that facilities provide safety shower and eye wash (SSEW) stations where applicable. The regulation states:

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

SAFETY PRACTICES

1. Always wear personal protective equipment (PPE) when working with chemicals. To protect the eyes wear safety glasses or goggles. If additional face protection is necessary, wear a combination of glasses or goggles and a face shield. Contact lenses DO NOT provide protection from chemical splashes but can be worn safely in combination with appropriate personal protective eyewear. Wear chemical resistant gloves and aprons to protect the body and skin from chemical splashes. Proper PPE is the primary way to prevent eye and skin injuries.
2. Provide and document training for all new lab employees concerning the location and how to operate your specific lab SSEW station. Some labs are equipped with SSEW facilities in the room, others are located in the hall. There are different types of units and various ways to initiate water flow.
3. Do not block or store any items in front of or under a safety shower or eyewash station. Tape off an area on the floor under the safety shower (approximately 3-sq. ft.) to remain clear at all times. Do not block or stack glassware or other items around drench hoses and eyewash stations located by sinks.

USE

REMEMBER YOUR VISION MAY BE IMPAIRED AND YOU MAY BE PANICKED WHEN YOU NEED THESE FACILITIES. KEEP THIS IN MIND WHEN LEARNING THE LOCATION AND USE OF THE SSEW.

Time is of the essence and a few seconds may mean the difference between permanent injury and full recovery.

For a chemical splash to the eyes, immediately flush with water while holding your eyelids open. Continue drenching for at least 15 minutes. Contact lenses should be washed from the eyes under flushing conditions, but if not, remove the lenses as soon as possible.

For a chemical spill on the body, immediately remove any contaminated clothing and begin drenching the area with water as soon as possible. Continue drenching for at least 15 minutes.

TYPES

Combination Unit: A shower with an eyewash or eye/face wash or drench hose in one common assembly.

Safety Shower: A shower that allows water to cascade over the entire body.

Eye-Face Wash: A device used to irrigate and flush both the face and eyes.

Hand-Held Drench Hose: A flexible hose connected to a water supply and used to drench the eyes, face, or body areas.

Self-contained Eyewash: Supplementary eyewash that contains its own flushing fluid and must be refilled or replaced after each use. Self-contained eyewash stations must be able to flush your eyes for a full 15 minutes without being refilled.

FUME HOOD WORK PRACTICES

When properly used, a well-designed hood in a ventilated room will protect you (*a trained laboratory worker*) from most airborne exposures to hazardous laboratory chemicals. The following work practices are always required when using chemical fume hoods; and more stringent work practices may be necessary in some circumstances.

Good Work Practices

1. Conduct all work and keep all apparatus at least 6 inches back from the face of the hood. A stripe on the bench surface is a good reminder.
2. Keep the hood sash closed as much as possible.
3. Keep the hood slots and baffles free of obstruction by apparatus or containers.
4. Do not permanently store chemicals or apparatus in the hood. Large equipment used inside the hood should be placed on blocks to allow airflow under the equipment. Store chemicals in an approved safety cabinet.
5. Do not put your head in the hood when contaminants are being generated.
6. Do not use the hood as a waste disposal mechanism. Solvent bottles in the fume hood must be capped when not in use.
7. Conduct any processes that may generate air contaminants at or above the Permissible Exposure Level (PEL) inside a hood.
8. Minimize foot traffic by the face of the hood. Do not make fast movements when taking things in and out of the hood.
9. Keep laboratory doors closed (exception: some laboratory designs require lab doors to be open).
10. Do not remove hood sash or sash panels except when necessary for apparatus set-up. Always replace sash or panels prior to working in the hood.
11. Do not place electrical receptacles or other spark sources inside the hood when flammable liquids or gases are present. No permanent electrical receptacles are permitted in the hood.
12. Use an appropriate barricade if there is a chance of explosion, implosion or eruption.

UCSC HAZARDOUS WASTE GENERATOR FACT SHEET

STORAGE

1. Is the hazardous waste storage area free of spills and leaks?

The hazardous waste storage area includes the area directly adjacent to and associated with the storage location. If your waste is stored in secondary containment on the laboratory floor, there should be no visible signs of contamination or spillage around containment trays. If your waste is stored in a designated cabinet or fume hood, there should be no visible signs of contamination or spillage in these areas. Immediately clean up any spilled materials in hazardous waste storage areas.

2. Are all hazardous waste containers designated for liquid storage in appropriate secondary containment and stored properly?

To ensure regulatory compliance and prevent an uncontrolled release, secondary containment trays must be able to hold all liquid waste in the event of breakage. Secondary containment trays are available from the Thimann Stockroom in two sizes. Do not place too many containers in one tray. Do not stack bottles in containment trays.

3. Are the hazardous waste containers and secondary containment trays free of spills or contamination?

There should be no visible signs of contamination on tops or sides of waste containers or anywhere in containment trays. Wipe down or clean containers and trays as necessary.

4. Are incompatible wastes segregated?

Segregate wastes into different containment trays based on hazard class (corrosive acid, corrosive base, flammable, oxidizer, etc.). If you need assistance on hazard class designation, refer to the Hazardous Waste Determination and Classification Guide (http://ehs.ucsc.edu/Waste_Management/ehs.asp?page=Determination_Guide) or contact the Hazardous Waste Program Manager at 9-3086.

5. Is extremely hazardous waste being handled properly?

Accumulation and storage of extremely hazardous wastes in the laboratory must be limited to less than 1 quart. To determine if you are generating extremely hazardous waste, please contact the Hazardous Waste Program Manager at 9-3086

6. Are containers and secondary containment trays easily accessed?

You must be able to see and access hazardous waste containers in order to inspect or clean up a spill. You should not have to move secondary containment trays or waste containers to visually inspect or access containers.

7. Are all containers sealed with proper fitting lids?

Check the lids carefully for a good fit. We receive 4 L glass bottles from several vendors and lids ARE NOT interchangeable in all circumstances. Parafilm, aluminum foil, and corks are not acceptable lids.

8. Are all waste containers kept capped or sealed except when adding hazardous waste?

Keep waste containers closed and sealed when not adding waste. Waste containers SHOULD NEVER be left opened when no one is in the laboratory, during a lunch hour, a break, or overnight.

9. Are all containers and lids made of a material compatible with the chemical waste contents?

Use glass bottles for solvent waste (EH&S recommends safety coated glass bottles), 5-gallon plastic carboys for larger quantities of photofixer waste, plastic bottles for hydrofluoric acid waste, and glass bottles for other acids and bases. If you have questions, contact the Hazardous Waste Program Manager at 9-3086.

10. Are all chemical waste containers stored in a safe location?

Do not store waste in high traffic areas where breakage could occur. Do not store waste near any heat source (drying ovens, incubators, etc.). Keep waste in a secured and supervised laboratory. When no one is present, the laboratory door should be locked.

11. Is all waste disposed of within 6 months of accumulation start date?

The accumulation start date begins as soon as you start adding waste to a container. In order to comply with regulations, hazardous waste must be removed from the labs within 6 months of the accumulation start date. To decrease the risk of accidental release and to coincide with EH&S off campus waste shipments, laboratories should not accumulate waste for more than 3 months. Dispose of any full containers promptly.

12. Is the container size appropriate for the rate of waste accumulation?

Use an appropriate size waste container to facilitate removal within 3 months and avoid large containers that take a long time to fill. Fill waste containers to only 95% capacity in order to allow headspace for changes in temperature.

LABELING**1. Do all chemical waste containers have a properly affixed EH&S hazardous waste tag?**

Attach hazardous waste tags from the online waste tag system to the container soon as waste collection begins in that container. The online system can be accessed at <http://otp.ucsc.edu>

2. Does the accumulation start date listed on the tag coincide with the first day chemical wastes were collected in the container?

All waste bottles must be tagged and dated as soon as waste collection begins in that container. The date field on the hazardous waste tag corresponds to the accumulation start date and must be completed when waste collection begins. The 6-month limit for waste accumulation in the laboratory starts as soon as the first material is placed in the container.

FAILURE TO PROPERLY TAG HAZARDOUS WASTES IS THE MOST FREQUENTLY CITED REGULATORY VIOLATION

FUGITIVE EMISSIONS – DRAIN DISPOSAL**1. Are solvent wastes being evaporated in the fume hood or open laboratory?**

Evaporation of wastes is NOT a legal means of disposal. Containers must be capped at all times to prevent evaporation and spillage. Cap your waste as indicated above in item #7 under STORAGE.

2. Are hazardous wastes being improperly disposed of in the sewer or ordinary trash?

Liquid and solid hazardous waste may NOT be disposed of in the trash or poured down the drain UNLESS it has been determined to be non-hazardous using the UCSC Hazardous Waste Guidelines. As a general rule, if it is purchased as a laboratory chemical reagent it should be disposed of as hazardous waste. If you have questions regarding sewer or ordinary trash disposal, please contact the Hazardous Waste Program Manager at 9-3086.

TRAINING**1. Have all personnel handling chemical wastes attended initial hazardous waste training offered by EH&S?**

EH&S offers initial training in hazardous waste handling, disposal, and proper documentation approximately twice a year. If individuals have not attended this course and are handling hazardous waste, they must be under direct supervision of a properly trained person and should plan to attend an EH&S hazardous waste training class at the next available session.