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University of California, Berkeley

Hazard Communication Plan

**To comply with Cal/OSHA regulations, this Hazard
Communication Plan must be completed.**

**All personnel must be trained on this document,
and its guidance must be followed.**

RESPONSIBILITIES AND CONTACTS

Employees covered by this Hazard Communication Plan template are managed by the following department: _____.

Describe the facilities (shop, studio, etc.), operations, and locations, (custodial work, plumbing work, etc.) covered by this document.

Location of the office or shop.

Building _____ Room _____

The Supervisor for this location or this operation (if most of the work is done in multiple locations) is:

(Name) (Work Phone No.) who is responsible for the following duties:

- Serve as a primary contact for operation safety issues.
- Complete this entire Hazard Communication Plan template.
- Review this template every year and update the required information.
- Ensure that all operation workers are trained on or have read the completed template and signed the Training Documentation section.
- Ensure that eyewashes and other emergency equipment are checked monthly.

Notes:

TRAINING DOCUMENTATION

- Department managers and line supervisors are responsible for implementing the Hazard Communication program and ensuring compliance throughout the group of employees they supervise.

All employees are responsible for:

- Reading and following the precautions outlined on container labels; locating MSDSs when necessary; utilizing department and campus hazard information sources; and requesting training on hazardous substances the employee is not familiar with.

I verify that I have read this Hazard Communication Plan, understand its contents, agree to comply with its requirements, and have been trained in the chemical hazards of my job. I understand that I have access to the following information:

- Material Safety Data Sheets (MSDSs) used in normal operations.
- Requirements for use of Personal Protective Equipment (PPE).
- Fact Sheet or Job Safety Analysis (JSA) applicable to the tasks I perform.
- Cal/OSHA Hazard Communication Regulation Title 8CCR §5194 (available at EH&S 642-3073, or www.ehs.berkeley.edu).

NAME (Printed)	SIGNATURE	DATE

Chemical Spills

- Unusual odors, eye irritation, or other exposure symptoms may indicate uncontrolled releases of chemicals that have adverse health effects or cause injury or property damage. Some chemical spills are obvious; others less so. Be alert to indications of a chemical release.
- Prevent people from entering spill area.
- Alert people in the immediate area.
- Call 911 if spilled material is an imminent hazard.
- Turn off ignition or heat sources if spilled material is flammable.
- Leave the area if spilled material is volatile (evaporates quickly) or is a powder that can become airborne.
- Confine the area of the spill with absorbent materials if it can be done safely.
- Prevent the spilled material from going down drains if possible.
- Close doors to affected areas.
- Post danger or warning signs.
- Clean spills only if they are minor, if you have been trained to do so, and if you have the appropriate protective equipment (e.g., a painter may clean a paint spill; a custodian may clean a custodial products spill).
- Alert EH&S during business hours at 642-3073. Call the UCPD dispatch at 911 during off-hours or weekends for an emergency, or 642-6760 for a non-emergency.
- Notify EH&S or UCPD if spilled chemicals enter any sink or drain. EH&S will contact EBMUD.

Chemical Exposures

- Remove victim from source of exposure.
- Call 911 if the injury is serious or if it is not safe to remove the victim.
- Immediately flush skin or eyes with water using an emergency shower or eyewash for 15 minutes or until help arrives.
- Remove contaminated clothing from the victim.
- Follow other emergency procedures as spelled out in the Material Safety Data Sheet (MSDS).
- Take the victim to the Tang Center Urgent Care Clinic (642-3188) if the injury is not serious. Send along the MSDS, if available. Go to the Alta Bates Hospital emergency room at 2450 Ashby Avenue, Berkeley, if the Tang Center is closed and medical attention is needed, or in the case of a serious injury.
- Notify EH&S immediately of any injury or hospitalization in order to meet Cal/OSHA requirements.

Medical Consultation

Cal/OSHA requires that personnel working with hazardous chemicals have access to a confidential medical evaluation under any of the following circumstances:

- An individual develops signs or symptoms of exposure to a chemical.
- Routine air monitoring reveals chemical exposure above established exposure limits.
- A spill or other incident results in the likelihood of a hazardous chemical exposure.

In these circumstances, medical evaluations are provided by the University Health Services located at the Tang Center, 2222 Bancroft Way.

University Health Services: Occupational Health Clinic: 642-6891

Urgent Care: 642-3188

CAMPUS RESOURCES

Job Safety Analysis, Equipment Operation Manuals & Other Safety Programs

Job Safety Analysis

Each operation with hazards (including chemical hazards) that could cause a serious injury (a visit to the emergency room) should be analyzed. A Job Safety Analysis (JSA) is used to identify hazards and hazard controls for such operations. The JSA Fact Sheet describes how to conduct a JSA and provides a blank JSA template. The fact sheet is available on the EH&S web site (www.ehs.berkeley.edu), from EH&S at 317 University Hall, or by calling 642-3073. Equipment or machine operation manuals may be used in lieu of a JSA if the manual identifies operational hazards and hazard controls. EH&S is available to assist supervisors in getting started with creating JSAs and to evaluate existing operations manuals.

Shop Safety Programs

Each shop should have a UC Berkeley Shop Safety Manual. This manual contains campus, department, and operations safety information including applicable University Fact Sheets and shop-developed JSAs. The Shop Safety Manual is located in _____ (room or N/A).

Non-Shop Safety Programs

Non-shop areas can include art studios, small tool rooms, darkrooms or other facilities, where potentially hazardous tools, equipment or processes are operated or stored. These areas are included in Hazard Communication Program, but because of their unique nature, do not fall under the definition of a shop. If applicable, the Shop Safety Manual can also be used in these areas. JSAs can also apply in these areas.

EH&S Fact Sheets also provide recommended safe practices for non-shop areas. These fact sheets are available from the EH&S web site (www.ehs.berkeley.edu) or from EH&S at 317 University Hall. Persons performing the type of work covered by a fact sheet should familiarize themselves with its content. Certain types of work may require EH&S-provided training.

Paper copies of JSAs and fact sheets are located in: _____ (room or N/A).

All campus departments are required by Cal/OSHA (Title 8 §CCR 3203) to follow the campus Workplace Health and Safety Program (Formerly known as the Injury and Illness Prevention Program - IIPP).

This program establishes the framework for the departmental safety program, which includes:

- A Department Safety Committee
- Annual workplace inspections (See the Shop Safety, Office Safety, or General Safety Self-Inspection form on the EH&S web site www.ehs.berkeley.edu).

If you have questions or concerns about health or safety, you can bring them to your department's attention by contacting your Department Safety Coordinator (DSC) or your representative on the Department Safety Committee.

Department Safety Coordinator Name and Contact Numbers

Your Department Safety Coordinator is designated by your department to help resolve health, safety, and environmental issues.

Name of Department Safety Coordinator _____ Phone No. _____

The Office of Environment, Health & Safety

The UC Berkeley Office of Environment, Health & Safety (EH&S) provides guidance and services to the campus community that promote health, safety, and environmental stewardship. If you have questions or need assistance, contact EH&S at 642-3073 or ehs@berkeley.edu.

INFORMATION ON CHEMICAL HAZARDS

Chemical Class	Physical and Health Hazards	Protective Measures
Acids	<ul style="list-style-type: none"> Acids are corrosive. Contact with skin or eyes may cause disfigurement or blindness. Contact with bases may result in a violent reaction and generate heat, pressure, and toxic by-products. 	<ul style="list-style-type: none"> Wear adequate Personal Protective Equipment (PPE) including eye and skin protection. Store away from bases. Flush exposed skin or eyes with water for 15 minutes.
Bases	<ul style="list-style-type: none"> Bases are corrosive. Contact with skin or eyes may cause disfigurement or blindness. Contact with acids may result in a violent reaction and generate heat, pressure, and toxic by-products. 	<ul style="list-style-type: none"> Wear adequate PPE, including eye and skin protection. Store away from acids. Flush exposed skin or eyes with water for 15 minutes.
Carcinogens and Mutagens	<ul style="list-style-type: none"> Can cause mutations in humans or animals. Can cause cancer in humans or animals. 	<ul style="list-style-type: none"> Wear adequate PPE, including eye and skin protection. Use appropriate engineering controls, such as fume hoods. Consider establishing a designated area for use of the material.
Compressed Gases	<ul style="list-style-type: none"> High pressure release can result in injuries. Damaged cylinders may vent or violently rupture. Oxygen displacement /Asphyxiation. 	<ul style="list-style-type: none"> Secure compressed gas cylinders in place, with two chains per cylinder. Cap cylinders when not in use.
Explosives and Potentially Explosive Chemicals	<ul style="list-style-type: none"> May violently explode if subjected to heat, shock, or other energy sources. 	<ul style="list-style-type: none"> Store in a secured area, limiting access to trained individuals only. Contact EH&S for special storage requirements. Keep away from energy sources.
Flammable Liquids	<ul style="list-style-type: none"> Liquid and/or vapors may burn or explode if exposed to an ignition source. Contact with oxidizers may cause fire or explosion. Vapors are usually toxic. 	<ul style="list-style-type: none"> Store in an approved flammable materials cabinet when quantities exceed 10 gallons. Keep away from ignition sources and oxidizers. Use appropriate engineering controls, such as fume hoods.

Local Exhaust

Always use a chemical fume hood or other local exhaust system when working indoors with hazardous chemicals that can volatilize or aerosolize.

Cal/OSHA regulations require that chemical fume hoods be routinely tested by staff with special equipment and expertise. EH&S provides the following services:

- Testing hoods annually to ensure they comply with Cal/OSHA requirements.
- Tagging or marking hoods that do not meet Cal/OSHA requirements. Hoods marked “unsatisfactory” must never be used for handling hazardous chemicals.
- Additional fume hood evaluations are available upon request.

Each fume hood must have some means of indicating airflow. This may be as simple as a magnehelic gage with an indicated range. Many newer hoods are now equipped with electronic flow sensors and alarms. Confirm that the hood is operating before using it. Contact EH&S (642-3073) if you suspect that a hood has inadequate airflow.

Required Personal Protective Equipment

Personal Protective Equipment (PPE) may be required in this operation when working with hazardous chemicals as determined by Supervisor or Lead on a case-by-case basis. Shorts, skirts, open-toed-shoes, loose clothing, and jewelry are not allowed in shops. Hair must be kept secured. The following PPE offer protection from chemical exposures:

- Body protection (coveralls, aprons)
- Appropriate gloves, steel-toed-shoes
- Safety glasses and or face shields
- Hearing protection

Operations that require any of the PPE listed above may require the development of a Job Safety Analysis JSA. (guidance available online at the EH&S web site, www.ehs.berkeley.edu/jsa.html).

Working with Particularly Hazardous Materials

Cal/OSHA requires that special precautions be taken when working with Particularly Hazardous Materials.

Such materials include:

- Select carcinogens such as benzene, certain arsenic compounds, formaldehyde, and vinyl chloride.
- Highly Toxic Substances: Usually defined as substances whose oral lethal dose (LD50) is less than 50 mg/kg (rat), such as most cyanide salts, arsenic compounds, and organic mercury compounds.

Special Precautions include:

- Establishing a designated area where this work is performed and post it with signs that identify the Particularly Hazardous Material. Eating, drinking, and storage of food or personal items must not be allowed in the designated area. PPE must be removed, and hands must be washed after working in this environment.
- Using local exhaust systems such as a fume hoods, glove boxes, or canopy hoods.
- Using contamination-control and decontamination procedures.

CONTROLLING EXPOSURES

CONTROLLING EXPOSURES

Consulting, Monitoring, and Inspections by EH&S
EH&S provides chemical exposure monitoring, operational safety consulting, and regulatory compliance inspections for all operations on campus. To schedule these services, contact EH&S at 642-3073.

Self-Inspection Program

Annual workplace inspections are required by the Workplace Health and Safety Program (Formerly known as the Injury and Illness Prevention Program - IIPP). Shop, Office, or General Workplace Self-Inspection forms that fulfill this requirement are available at the EH&S web site (www.ehs.berkeley.edu). Correct any deficiencies and retain copies of the completed inspection forms on site in case of an inspection by a regulatory agency. Completed self-inspection forms are located at or are maintained by:

_____ (room or person where forms can be found)

Emergency Eyewash/Showers

Cal/OSHA requires that all emergency eyewashes are tested monthly to ensure operation and to flush out contaminants such as dirt and rust. Employees in the immediate area are responsible for testing their eyewashes and documenting each test. Eyewash testing tags are available from EH&S. Emergency showers are inspected annually by Physical Plant-Campus Services (PP-CS). If your emergency shower has not been inspected within the last year, request service from PP-CS (642-1032).

Portable Fire Extinguishers

California Fire Code requires that all fire extinguishers are serviced annually. PP-CS coordinates annual extinguisher servicing.

Respiratory Protection

All respirator users on campus must be part of the Campus Respiratory Protection Program. EH&S, with assistance from University Health Services, administers this program which includes:

- Air monitoring of the workplace to ensure a respirator is necessary and will provide adequate protection.
- Fit testing, training, and respiratory selection to ensure that respirators will be effective.
- Medical screening of respirator users to ensure user safety. If you believe your work requires a respirator, or if you have questions about respirator use, call EH&S at 642-3073.

Requirements for working with corrosives and cryogenics:

- When handling corrosives in large quantities (100ml or greater), wear tight-fitting chemical goggles or goggles and a plastic face shield.
- When transferring or pouring large amounts of liquid corrosives, wear a rubber apron.
- When handling cryogenic liquids, wear heavy gloves, goggles, and a face mask.

Unwanted Chemicals

Do not dispose of unwanted chemicals down a drain or by evaporation. See the EH&S publications, Guidelines for Drain Disposal of Chemicals, and Guidelines for Minimizing Toxic Air Contaminant Emissions for more details. For removal of unwanted hazardous chemicals:

- Package compatible chemicals in boxes and label the boxes with a print copy of the electronic Materials Packing List (eMPL).
- A recharge authorization account form must be completed if EH&S does not have one on file for the department.
- Submit the eMPL to EH&S through the EH&S web site. For more details, see the Unwanted Hazardous Chemicals Fact Sheet on the EH&S web site, or call 642-3073.

Oxidizers	<ul style="list-style-type: none"> • Contact with flammable or combustible material may cause fires, explosions, or violent reactions. 	<ul style="list-style-type: none"> • Keep away from flammable or combustible materials.
Poisons	<ul style="list-style-type: none"> • Inhalation, skin contact, or ingestion can cause poisoning or local or systemic health effects. 	<ul style="list-style-type: none"> • Wear adequate PPE, including skin and eye protection. • Flush exposed skin or eyes with water and seek medical attention. • Use appropriate engineering controls, such as fume hoods.
Teratogens	<ul style="list-style-type: none"> • Can cause birth defects if exposure occurs to pregnant women. • Inhalation, skin contact, or ingestion may have other adverse health effects. 	<ul style="list-style-type: none"> • Wear adequate PPE, including eye and skin protection. • Use appropriate engineering controls, such as fume hoods. • Consider establishing a designated area for use of the material. • If you have concerns about teratogens or other reproductive hazards, contact EH&S.
Toxic Gases	<ul style="list-style-type: none"> • Release of toxic gas into occupant breathing space may cause adverse health effects or death. 	<ul style="list-style-type: none"> • Purchases of toxic gases must be approved by EH&S as a requirement of the campus Toxic Gas Program. • Store and use in a ventilated enclosure constructed of compatible materials.

Contact EH&S (642-3073) or visit EH&S web site (www.ehs.berkeley.edu) for additional information and reference materials on chemical safety and related topics, including:

- The contents of applicable Cal/OSHA standards (copies are available).
- Comprehensive health and safety information about the chemicals present in the operation, such as exposure limits for various hazardous substances; physical and health hazards of chemicals used in the operation; signs and symptoms associated with overexposure; appropriate work practices and equipment for preventing exposure to hazardous chemicals; and proper storage and disposal of hazardous substances.

CHEMICAL HAZARD COMMUNICATION

This Hazard Communication Plan is a Cal/OSHA requirement and has been established in order to improve communication and training associated with hazardous substances. When completely filled-out, this template will help ensure a healthy work environment by increasing employee awareness of safe work practices, emergency procedures, and workplace chemicals and their potential health effects.

Operations Supervisor Responsibilities

The operation supervisor is responsible and accountable for implementing this Hazard Communication Plan and for ensuring employee compliance. This includes informing employees about the hazards associated with the chemicals to which they may be exposed and training them to take safety precautions.

Individual Employee and Student Responsibilities

All employees and students are responsible for following the guidance in their departmental Hazard Communication Plan and for handling chemicals safely.

Chemical Inventory

Every hazardous substance known to be present in the workplace must be listed in the Chemical Inventory database. The Chemical Inventory must be updated annually, or when significant changes occur.

A paper copy of the Chemical Inventory for this operation is located in _____ (room), OR the inventory may be accessed online by the chemical inventory contact, _____ (name).

Material Safety Data Sheets

A Material Safety Data Sheet (MSDS) containing the information required by Cal/OSHA must be readily available to employees for each hazardous substance listed in the Chemical Inventory database.

MSDSs must be readily accessible to all employees and their representatives (union, supervisory, and regulatory agencies), and contractors for viewing or copying during each work shift.

Master MSDS file location for your department:

(also available online at the EH&S web site www.ehs.berkeley.edu/msds.html)

Container Labeling

The supervisor will ensure that all containers have either the original manufacturer's label or a generic label which includes the following:

- Product identity (trade, product, or chemical name).
- Appropriate hazard warnings (health and physical hazards).

Labels may not be defaced or removed from a container while it still contains hazardous material. Labels are not required on portable containers that are intended for immediate use (e.g., measuring cups, mixing jugs, transfer containers).

Employee Information and Training

The supervisors must provide employees (including temporary employees and contractors) with information and training with regard to hazardous substances in their work area upon assignment or reassignment and whenever a new substance is introduced into the work area. EH&S Specialists are available at 642-3073 for guidance in providing this training.

The operation supervisor will perform on-the-job training using MSDS specific chemicals used in their work areas. Training will be given within 30 days of the date that new or revised MSDSs are received or that new chemicals are introduced into the work area.

Informing Contractors and Contract Workers

Supervisors are responsible for ensuring that outside contractors/contract workers (trades, custodians, cooks), are informed of any chemical hazards.

Hazardous Non-routine Tasks

If employees identify hazards related to non-routine tasks, they should contact their supervisor to get the following information:

- Specific hazards
- Measures that will provide protection from the hazards including ventilation, Personal Protective Equipment (PPE), buddy systems, and specific emergency procedures.

EH&S Specialists are available at 642-3073 to assist supervisors in determining the precautions for non-routine tasks.

Hazardous Substances in Unlabeled Pipes

Employees who work on unlabeled pipes must be informed of the hazardous substances contained within.

Prior to starting work, the supervisor should provide the employees for the following information:

- Hazardous substance(s) in the pipe
- Potential hazards
- Safety precautions to be taken

EH&S Specialists are available at 642-3073 to assist supervisors in hazard determination and PPE selection.