Purpose

This policy establishes requirements and responsibilities for the safe use of hazardous chemicals in all facilities at UCSF. It is based on federal, state, and local regulations and UCSF’s commitment to providing a safe environment for all UCSF employees, students, patients, contractors, visitors and volunteers.

Definitions

Control Area

Designated areas within buildings which are separated from the rest of the building by fire-rated walls, doors and other construction. The fire and building codes establish limits on the Maximum Allowable Quantities (MAQ) of hazardous materials permitted to be stored, or used in each control area.

Hazardous Materials (Chemicals)

Any chemicals or substances which can present a physical or a health hazard, including but not limited to flammables, corrosives, oxidizers, explosives, potentially explosive chemicals, reactive chemicals, pyrophorics, toxic agents, carcinogens, reproductive toxins, irritants, and sensitizers.

Maximum Allowable Quantities (MAQs)

The California Fire Code sets Maximum Allowable Quantities (MAQs) for the storage and use of hazardous materials inside a building or a control area. The quantity allowed in a particular control area depends on multiple factors such as the occupancy type of the building, the fire rating of the walls, how the hazardous material is stored (for example in flammable storage cabinets), and whether or not fire suppression systems (e.g., automatic fire sprinklers) are present throughout the building.
Principal Investigator (PI)

The individual ultimately responsible for the appropriate scientific and financial conduct of a sponsored research project. On occasion, co-principal investigators who share responsibility for a project.

Policy

A. Training

All UCSF employees, students, volunteers, and visitors are required to be trained on chemical hazards and appropriate safety procedures before using hazardous chemicals in the workplace. Training includes general training provided by EH&S, and function-specific training provided by the Principal Investigator, Lab Manager or other supervisor. Training records are maintained and can be reviewed in the UC Learning Center Learning Management System.

B. Hazard Communication

Principal Investigators and other supervisors are responsible for ensuring hazardous chemical use and storage areas have appropriate hazard warning signs, and that all containers of hazardous chemicals in their workplace are labeled with the contents and hazards of the chemicals. All UCSF employees, students, volunteers, and visiting researchers are required to read and be familiar with the manufacturer’s Safety Data Sheet (SDS) of the hazardous chemical before use.

C. Standard Operating Procedures (SOPs)

In laboratories, Principal Investigators must provide to their employees and students written SOPs for the use of hazardous chemicals that adequately address the chemical hazards and safe work procedures. EH&S can assist researchers and departments with satisfying this requirement. Individuals working in laboratories must document their familiarity with the SOP before beginning the activity covered by the SOP.

D. Safe Storage of Hazardous Chemicals

Principal Investigators and other supervisors are responsible for ensuring the following safe practices are maintained at all times:

i. Storage practices must reflect good housekeeping and provide safe egress, including proper segregation of incompatible chemicals.

ii. Store flammable and corrosive chemicals in approved, listed hazardous materials storage cabinets when not in use.

iii. Properly dispose of chemicals that are no longer needed, have exceeded their useful shelf life, or may have become reactive or shock sensitive due to aging.

iv. Maintain an accurate chemical inventory of all hazardous chemicals. Inventories must be updated and submitted to EH&S at least annually, or whenever there is a significant change in the chemicals present in the lab or other room.

v. Maximum Allowable Quantities (MAQs) for a particular control area must not be exceeded.
- Principal Investigators and department heads have a responsibility to ensure MAQs for hazardous chemicals are not exceeded.
- In areas where more than one PI occupies the same control area, the MAQ limits will be allocated among PIs based on their percentage of the gross square footage (gsf) of assigned space within the control area, unless other allocation arrangements have been agreed upon in writing by the affected departments and submitted to the EH&S Fire Marshal.

E. Engineering Controls

Principal Investigators and department heads are responsible for ensuring engineering controls are used wherever practical to minimize employee exposures and mitigate hazards.

F. Personal Protective Equipment (PPE)

Principal investigators and department heads are responsible for ensuring all employees, students, volunteers, and visiting researchers working with hazardous chemicals are provided adequate PPE, and trained on its use. For work in laboratories, the Laboratory Hazard Assessment Tool (LHAT) is to be used to help determine appropriate PPE.

G. Hazardous Waste

EH&S advises UCSF laboratories on the safe and proper disposal of hazardous chemicals and which chemicals must be managed as a hazardous waste. Principal Investigators and department heads are responsible for ensuring all personnel are properly trained on the management of hazardous waste. Hazardous waste generators are responsible for ensuring their hazardous waste is appropriately labeled, stored, and disposed of through EH&S, and does not exceed accumulation time limits or maximum allowable quantities. Laboratories requesting the disposal of large amounts of chemicals at one time, or who request the disposal of shock sensitive chemicals which require stabilization before safe transport, may be recharged for disposal.

H. Security

Areas where hazardous chemicals are used and/or stored must be restricted from unauthorized access. Laboratory doors to unoccupied areas where hazardous chemicals are stored must remain locked.

I. Shipping and Transportation

EH&S advises UCSF departments on the safe shipment and transport of hazardous chemicals, as regulated by the US Department of Transportation (DOT) and the International Air Transport Association (IATA). All employees and students transporting hazardous chemicals or offering them for transport must complete documented training provided by EH&S.

J. Lab Close-Outs

When a lab is to be closed due to PI relocation or other reasons, hazardous materials used by that research group may not be abandoned in place. Prior to lab closure, the PI and his/her department must arrange for safe transfer or disposal of all hazardous materials in the lab. Any abandoned materials will be removed by EH&S and recharged to the researcher’s
K. Enforcement

Principal Investigators and other supervisors are responsible for routinely monitoring conditions and operations in the areas they supervise, and providing guidance to subordinates to maintain safe work environments. Compliance with the requirements of this policy is periodically monitored by EH&S, and deficiencies are reported to the lab manager. Corrective actions not made in a timely fashion are to be escalated by EH&S to the department head, and higher if needed, to achieve an acceptable and safe outcome. In cases where corrective actions are not implemented, the CESC may issue correspondence prohibiting certain lab procedures or ordering the removal of specific hazardous materials.

Responsibilities

A. Chancellor

The Chancellor is responsible for the establishment and implementation of environmental health and safety policies at all facilities under campus control. Appropriate vice chancellors, deans, chairs, laboratory directors, department managers, Principal Investigators, supervisors, and EH&S personnel are jointly and cooperatively responsible for the implementation, monitoring, and enforcement of these policies.

B. Chemical and Environmental Safety Committee (CESC)

The CESC consists of UCSF faculty and staff charged with providing expert advice on chemical safety to the chancellor. The committee arbitrates campus disagreements regarding laboratory practices and has the authority to enforce chemical safety policies.

C. Office of Environment, Health and Safety (EH&S)

EH&S is responsible for coordinating this policy’s implementation, and for monitoring and enforcing the chemical safety program at UCSF. EH&S employs the UCSF Chemical Hygiene Officer, who serves as an expert on chemical safety and in conjunction with the CESC recommends and implements policies on hazardous chemical use at UCSF. The Chemical Hygiene Officer is responsible for maintaining the UCSF Chemical Hygiene Plan and related Standard Operating Procedure (SOP) templates, which detail specific procedures and guidelines that must be followed by all persons working in UCSF laboratories.

In addition, EH&S Fire Inspectors and the Campus Fire Marshal enforce applicable sections of the California Fire Code, including the Maximum Allowable Quantities (MAQ?s) for each category of hazardous material.

EH&S is responsible for performing quarterly inspections of all UCSF laboratories, recommending safe practices, reporting on findings, and assisting end users to correct unsafe conditions and practices in a timely fashion. EH&S DSAs work collaboratively with PIs, lab managers, and research staff to promote a safe and health work environment. EH&S is also responsible for evaluating potential personnel exposures to hazardous materials, for establishing appropriate exposure controls, and for ensuring appropriate safety training is provided to persons working with hazardous chemicals.

Finally, EH&S is designated as the UCSF regulatory liaison, reporting to government agencies
the required information related to hazardous materials use and environmental release or other incidents.

D. Deans and Department Heads

Deans and department heads are responsible for ensuring Principal Investigators and other supervisors within their departments are providing a safe work place for their students and employees, and abiding by the UCSF chemical safety policy.

E. Principal Investigators and Other Supervisors

Principal Investigators (PIs) and other supervisors have a responsibility to provide a safe work place to all employees, students, contractors and visitors working in their workspaces which includes enforcing compliance with chemical safety policies. PIs and other supervisors are responsible for ensuring appropriate training is completed by those individuals working under their supervision, and for ensuring that those individuals wear appropriate Personal Protective Equipment (PPE) and follow safe procedures. PIs and other supervisors are responsible for ensuring timely correction of identified hazards in areas under their jurisdiction, and for ensuring a current chemical inventory is reported to EH&S on an annual basis, or whenever the physical inventory changes significantly.

F. UCSF Employees, Students, Contractors, Volunteers and Visitors

All employees, students, and volunteers working with hazardous chemicals are required to comply with all warning labels, signs, safety training, Chemical Hygiene Plan (CHP) requirements, Standard Operating Procedures (SOPs) and this chemical safety policy.

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