

University of California, Berkeley

Department of Nuclear Engineering

Injury and Illness Prevention Program

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Nuclear Engineering

Injury & Illness Prevention Program

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I. INTRODUCTION AND PURPOSE

It is the policy of the University of California, Berkeley to maintain a safe and healthful work environment for each employee (including student and contract employees), and to comply with all applicable occupational health and safety regulations. The Nuclear Engineering Injury and Illness Prevention Program (IIPP) is intended to establish a framework for identifying and correcting workplace hazards within the department, while addressing legal requirements for a formal, written IIPP.

II. RESPONSIBILITIES

Department Chair, Per Peterson

The Department Chair, Per Peterson, has primary authority and responsibility to ensure departmental implementation of the IIPP and to ensure the health and safety of the department's faculty, staff and students. This is accomplished by communicating the Berkeley campus's emphasis on health, safety, and environmental protection, analyzing work procedures for hazard identification and correction, ensuring regular workplace inspections, providing health and safety training, and encouraging prompt employee reporting of health and safety concerns without fear of reprisal.

Nuclear Engineering Safety Committee

The Nuclear Engineering Safety Committee has the ongoing responsibility to maintain and update this IIPP, to assess departmental compliance with applicable regulations and campus policies, to evaluate reports of unsafe conditions, and to coordinate any necessary corrective actions. The Safety Committee meets quarterly and includes representatives from the technical staff and the major experimental groups, including Fusion, Thermal Hydraulics, and Nuclear Materials. Each employee has a designated representative on the committee. Currently (9/2011), the department's Safety Committee consists of:

- E. C. Morse, Chair
- Nicolas Zweibaum, NE Graduate Student
- Brian Plimley, NE Graduate Student
- Dan Chivers, Postdoc in Nuclear Forensics
- Dan Essley, Building Coordinator
- Jeff Bickel, Department Safety Officer

- Lisa Zemelman, Committee Secretary

The Safety Committee membership rotates periodically.

Unsafe conditions that cannot be immediately corrected by an employee or his/her supervisor should be reported to the Department Safety Coordinator or any Safety Committee member by filling out a "Report of Unsafe Condition or Hazard" form (IIPP Form 1).

Timely correction of workplace hazards will be tracked by the Safety Committee which will receive and review reports of unsafe conditions, workplace inspection reports, and injury reports. Specifically, the Safety Committee will:

- Review the results of periodic, scheduled workplace inspections to identify any needed safety procedures or programs and to track specific corrective actions
- Review supervisors' investigations of accidents and injuries to ensure that all causes have been identified and corrected
- Where appropriate, submit suggestions to department management for the prevention of future incidents
- Review alleged hazardous conditions brought to the attention of any committee member, determine necessary corrective actions, and assign responsible parties and correction deadlines
- Review any curtailment or stop work actions based on conditions representing imminent danger to health or safety
- When determined necessary by the Committee, the Committee may conduct its own investigation of accidents and/or alleged hazards to assist in establishing corrective actions
- Submit recommendations to assist department management in the evaluation of employee safety suggestions

The Safety Committee must prepare and make available to all department personnel written minutes of issues discussed at the meetings. The Committee meeting minutes must be documented on IIPP Form 2, "Safety Committee Meeting Documentation," or a similar form. These minutes are posted on the Safety Bulletin Board located on the fourth floor of Etcheverry or [NE/Safety web link](#) and must be maintained on file for at least one year.

The Safety Committee can seek assistance in the remediation of a hazard from other departments, including the Office of Environment, Health & Safety (EH&S) for campus health and safety issues, University Health Services (UHS) for ergonomic and workers' compensation issues, the University of California Police Department (UCPD) for personal security concerns, or the Office of Radiation Safety (ORS) for radiation and laser beam issues (see Section X).

Department Safety Coordinator (Jeff Bickel, 642-5015)

The Department Safety Coordinator is Jeff Bickel. The Safety Coordinator has responsibility for:

- Ensuring that the Safety Committee is aware of all accidents which have occurred, and all hazards which have been observed since the last meeting
- Working with the Building Coordinator to address facility-related safety concerns
- Assisting in the coordination of required health and safety training
- Serving as liaison with EH&S and other campus safety resources on issues the department cannot resolve
- Communicating with department personnel on new and emerging safety issues, as well as providing periodic reminders of existing policy
- Preparing reports of work stoppage based on imminent danger for notification of Chair, Dean of Engineering and EH&S
- Tracking the completion of corrective actions brought to the safety committee
- Regularly visiting work spaces to observe and enforce safe work practices
- Maintaining copies of Safety Committee minutes and other safety-related records
- Assisting managers and supervisors to develop, implement and maintain required programs

The Safety Coordinator may seek assistance from other members of the department as necessary to meet these responsibilities.

Managers

Managers are defined as academic and non-academic managers including Principal Investigators, other faculty and any other person(s) with direct oversight of operations. Managers may delegate specific activities to supervisors, but they retain responsibility for ensuring duties are carried out appropriately. Key responsibilities that may be performed by

managers or delegated to supervisors are listed below. Managers have particular responsibilities in the program areas listed in Appendix B.

Supervisors

Supervisors play a key role in the implementation of the department's IIPP. (For the purpose of this template, the term "supervisor" includes any employee who oversees the work of others.) Supervisors may be Managers, Management Services Officers, Senior Research Associates, Department Chairs, Principal Investigators, or subordinate staff. They are responsible for:

- Communicating to their staff, students and visitors the Berkeley campus's emphasis on environmental health and safety (EH&S)
- Ensuring periodic, documented inspection (self-assessments) of workspaces under their authority
- Promptly correcting identified hazards and deficiencies in safety program implementation
- Developing, implementing, and enforcing safe and healthful work practices
- Providing appropriate safety training and safety equipment and personal protective equipment
- Implementing measures to eliminate or control workplace hazards

Stopping any employee's work that poses an imminent danger to health and safety to either the employee or any other individual

- Informing employees and students of the availability of a medical surveillance program to provide assistance in the case of potentially hazardous exposures or injuries
- Encouraging employees to report health and safety issues to the Safety Committee without fear of reprisal

[University Health Services](#) provides resources for supervisors to create a health work environment.

All Employees

It is the responsibility of all faculty and staff to comply with all applicable health and safety regulations, UC policies, and established work practices. This includes but is not limited to:

- Observing health and safety-related signs, posters, warning signals and directions
- Reviewing the building emergency plan and assembly area

- Learning about the potential hazards of assigned tasks and work areas
- Taking part in appropriate health and safety training
- Following all safe operating procedures and precautions
- Using proper personal protective equipment
- Warning coworkers about defective equipment and other hazards
- Reporting unsafe conditions immediately to a supervisor, and stopping work if an imminent hazard is presented
- Participating in workplace safety inspections

III. IDENTIFYING WORKPLACE HAZARDS

Regular, periodic self-performed workplace safety inspections must be conducted throughout the department by project staff. By law, the first of these inspections must take place when the IIPP is first adopted by the department. The inspections should be noted on IIPP Form 3 or other documentation, and copies of this documentation must be maintained by the department for at least one year. These regular inspections will be supplemented with additional inspections whenever new substances, processes, procedures, or equipment introduced into the workplace represent a new occupational safety and health hazard or whenever supervisors are made aware of a new or previously unrecognized hazard.

Generally, supervisors are responsible for identification and correction of hazards that their staff and/or students face and should ensure that work areas they exercise control over are inspected at least annually. Supervisors should check for safe work practices with each visit to the workplace and should provide immediate verbal feedback where hazards are observed.

The "Report of Unsafe Condition" Form 1 should be filled out when a referral is made to the Safety Committee as a result of a condition discovered during an inspection for which the responsible supervisor could not determine an immediate remedy. The "Report of Unsafe Condition" form can also be obtained from the bulletin board on the fourth floor, filled out and turned in to the Nuclear Engineering mailbox addressed to "Safety Committee Chair" anonymously.

IV. COMMUNICATING WORKPLACE HAZARDS

Supervisors are responsible for communicating with all workers about safety and health issues in a form readily understandable by all workers. All department personnel are encouraged to communicate safety concerns to their supervisor without fear of reprisal.

The Safety Committee is another resource for communication regarding health and safety issues for department employees. Each employee has a representative on the committee that will inform him or her of hazard corrections and committee activities. Additionally, Safety Committee minutes and other safety-related items are posted on the Safety Bulletin Board on the fourth floor of Etcheverry. Employees will also be informed about safety matters by e-mail, voice mail, distribution of written memoranda or on the [NE/Safety Web link](#). Occasionally, the Safety Committee may also sponsor seminars or speakers or coordinate other means to communicate with employees regarding health and safety matters. The DSC will also issue communications on safety related matters.

Supervisors are responsible for ensuring that employees are supplied access to hazard information pertinent to their work assignments. Information concerning the health and safety hazards of tasks performed by department staff is available from a number of sources. These sources include, but are not limited to, Material Safety Data Sheets (MSDSs, see below), equipment operating manuals, the Department Safety Coordinator, EH&S, campus libraries, container labels and work area postings.

Material Safety Data Sheets

Material Safety Data Sheets (MSDSs) provide information on the potential hazards of products or chemicals. Hard copies of MSDSs for the chemicals used in the department are available in the Nuclear Engineering Department Office. If an MSDS is found to be missing, and cannot be obtained from campus resources, a new one can be obtained by faxing a written request to the manufacturer. A copy of this request should be kept until the MSDS arrives.

MSDSs are also available over the Internet from a variety of sources. They can be obtained by accessing the EH&S web page (<http://www.ehs.berkeley.edu>) and clicking on "MSDS." For further information, contact EH&S for a fact sheet explaining how to use MSDSs. Videos and training on how to read and understand the information presented on an MSDS are also available from EH&S. The DSC will assist with obtaining MSDS.

Equipment Operating Manuals

All equipment is to be operated in accordance with the manufacturer's instructions, as specified in the equipment's operating manual. Copies of operating manuals should be kept with each piece of equipment in the department. Persons who are unfamiliar with the operation of a piece of equipment and its potential hazards must at least read the operating manual before using the equipment. Introduction of new, customized or extensively modified equipment require that the project develop appropriate operating manuals. Training should also be sought from an experienced operator or supervisor.

V. CORRECTING WORKPLACE HAZARDS

Hazards discovered either as a result of a scheduled periodic inspection or during normal operations must be corrected by the supervisor in control of the work area, or by cooperation between the department in control of the work area and the supervisor of the employees working in that area. Supervisors of affected employees are expected to correct unsafe conditions as quickly as possible after discovery of a hazard, based on the severity of the hazard.

Specific procedures that can be used to correct hazards include but are not limited to the following:

- Tagging unsafe equipment "Do Not Use/Operate Until Repaired," and providing a list of alternatives for employees to use until the item is repaired. The DSC has suitable tags available. Tags shall not be removed except when the condition is corrected.
- Stopping unsafe work practices and providing retraining on proper procedures before work resumes.
- Reinforcing and explaining the need for proper personal protective equipment and ensuring its availability.
- Barricading areas that have chemical spills or other hazards and reporting the hazardous conditions to a supervisor or Building Coordinator.

Supervisors should use the "Hazard Correction Report" (IIPP Form 4) to document corrective actions, including projected and actual completion dates. If necessary, supervisors can seek assistance in developing appropriate corrective actions by submitting a "Report of Unsafe Condition" to the Safety Committee. If the Safety Committee requires assistance from other campus resources such as EH&S, PP-CS, or UCPD, these resources should be contacted immediately.

If an imminent hazard exists, work in the area should cease, and the appropriate supervisor must be contacted immediately. If the hazard cannot be immediately corrected without endangering employees or property, all personnel need to be removed from the area except those qualified and necessary to correct the condition. These qualified individuals will be equipped with necessary safeguards before addressing the situation. Report any work stoppage under this authority to the DSC who will make appropriate notifications to EH & S and other required parties.

VI. INVESTIGATING INJURIES AND ILLNESSES

Injury Reporting

Employees who are injured at work must report the injury immediately to their supervisor. Students who are not employees who are injured or involved in an accident should report the incident to their instructor. In either case, if immediate medical treatment beyond first aid is needed, call 9-911. The injured party will be taken to the appropriate hospital or medical center. If non-emergency medical treatment for work-related injuries or illnesses is needed, call the Tang Center's Occupational Health Clinic (2-6891) or Urgent Care Clinic (2-3188).

The supervisor of the injured employee must work with the Department Manager, Selpha Odero, to ensure that the "Employer's Report of Occupational Injury or Illness" and a "Workers' Compensation Claim Form" are completed properly and submitted to the Workers' Compensation Office ([Tang Center](#), Suite 2100).

If the injured employee saw a physician, the supervisor should obtain a medical release form before allowing the employee to return to work. The health care provider may stipulate work tasks that must be avoided or work conditions that must be altered before the employee resumes his or her full duties.

Injury Investigation

The employee's supervisor or student's instructor is responsible for performing an investigation to determine and correct the cause(s) of the incident. Specific procedures that can be used to investigate workplace accidents and hazardous substance exposures include:

- Interviewing injured personnel and witnesses
- Examining the injured employee's workstation for causative factors
- Reviewing established procedures to ensure they are adequate and were followed
- Reviewing training records of affected employees
- Determining all contributing causes to the accident
- Taking corrective actions to prevent the accident/exposure from reoccurring
- Recording all findings and actions taken

The supervisor's findings and corrective actions should be documented and presented to the Safety Committee using the "Occupational Accident, Injury or Illness Investigation Report" (IIPP Form 5). If the supervisor is unable to determine the cause(s) and appropriate corrective actions, other resources should be sought. Available resources include the department's Safety Committee, EH&S, and other campus safety organizations (see Section X).

The Safety Committee will review each accident or injury report to ensure that the investigation was thorough and that all corrective actions are completed. Investigations and/or

corrective actions that are found to be incomplete will be routed back to the supervisor for further follow-up, with specific recommendations noted by the committee. Corrective actions will be tracked by the DSC. Corrective actions that are not implemented in a reasonable period of time will be brought to the attention of Per F. Peterson, Department Chair by the Department Safety Coordinator.

VII. EMPLOYEE HEALTH AND SAFETY TRAINING

Employee safety training is provided at no cost to the employee and is conducted during the employee's normal working hours on University time. Safety training may be presented by a knowledgeable supervisor, other department personnel, or by representatives from other relevant campus departments. Regardless of the instructor, all safety training must be documented using the "Safety Training Attendance Record" (IIPP Form 6) or an equivalent record that includes all the information required on IIPP Form 6. By law, this documentation must be retained by the department for at least one year.

Initial IIPP Training

When the IIPP is first implemented, all department personnel will be trained on the structure of the IIPP, including individual responsibilities under the program, and the availability of the written program. Training will also be provided on how to report unsafe conditions, how to access the Safety Committee, and where to obtain information on workplace safety and health issues.

Personnel hired after the initial training session will be oriented on this material as soon as possible by the Safety Coordinator or appropriate supervisor. These individual training sessions will be documented using IIPP Form 7, "New Employee Safety Training Record," or the equivalent. This document must also be kept by the department for at least one year.

Training on Specific Hazards

Supervisors are required to be trained on the hazards to which the employees under their immediate control may be exposed. This training aids a supervisor in understanding and enforcing proper protective measures.

All supervisors must ensure that the personnel they supervise receive appropriate training on the specific hazards of work they perform, and the proper precautions for protection against those hazards. Training is particularly important for new employees and whenever a new hazard is introduced into the workplace. Such hazards may include new equipment, hazardous materials, or procedures. Health and Safety training is also required when employees are given new job assignments on which they have not previously been trained and whenever a supervisor is made aware of a new or previously unrecognized hazard.

Specific topics which may be appropriate to department personnel include but are not limited to the following:

- Fire prevention techniques and fire extinguisher use
- Obtaining emergency medical assistance and first aid
- Disaster preparedness and response, including building evacuation procedures
- Health and safety for computer users
- Back care, body mechanics, and proper lifting techniques
- Hazard communication, including training on MSDSs, chemical hazards and container labeling
- Radiation Safety Training on the particular hazards of the radioactive materials and radiation generating machines in their work area.
- Electrical Safety
- Proper housekeeping
- Lock Out/Tag Out (LOTO) of equipment
- Confined Space Entry procedures
- Chemical spill reporting procedures

The Nuclear Engineering Department Safety manual, which is used a field guide for researchers in the nuclear engineering department, has been attached as an appendix to this IIPP.

Safety Videos

A list of workplace safety videos that are available for borrowing can be obtained by contacting EH&S. Videos are available on a wide range of topics, including hazard communication, chemical safety, and various physical hazards. You can read descriptions of the videos and order them on-line via the EH&S web site at <http://ehs.berkeley.edu> by clicking on "Videos" under the "Publications" heading. Videos should be used to supplement, not replace, face-to-face safety instruction, so that trainees have an opportunity to ask questions of a knowledgeable instructor.

VIII. ENSURING COMPLIANCE

All department personnel have the responsibility for complying with safe and healthful work practices, including applicable regulations, campus policy, and departmental safety procedures. Overall performance in maintenance of a safe and healthful work environment should be recognized by the supervisor and noted in performance evaluations. Employees will not be discriminated against for work-related injuries, and injuries will not be included in performance evaluations, unless the injuries were a result of an unsafe act on the part of the employee.

Standard progressive disciplinary measures in accordance with the applicable personnel policy or labor contract will result when employees fail to comply with applicable regulations, campus policy, and/or departmental safety procedures. Faculty members will be disciplined for unsafe practices in accordance with the Faculty Code of Conduct. Students not employed by the University will be disciplined for unsafe practices in accordance with the Student Code of Conduct. All personnel will be given instruction and an opportunity to correct unsafe behavior. Repeated failure to comply or willful and intentional non-compliance may result in disciplinary measures up to and including termination.

IX. RECORD KEEPING

Documents related to the IIPP are maintained in the Nuclear Engineering Department Office. By law, certain documents related to the IIPP must be kept by the department for at least one year. These records include:

- Records of scheduled and periodic workplace inspections, including the persons conducting the inspection, any identified unsafe conditions or work practices, and corrective actions (IIPP Form 3 or equivalent)
- Employee safety training records, including the names of all attendees and instructors, the training date, and material covered (IIPP Forms 6 and 7 or equivalent)

Other documents related to the IIPP that should be kept on file include:

- Reports of Unsafe Conditions or Hazards (IIPP Form 1)
- Safety Committee Meeting Documentation (IIPP Form 2)
- Hazard Correction Reports (IIPP Form 4)
- Accident, Injury or Illness Investigation Reports (IIPP Form 5)

The DSC will serve as a focal point for processing, tracking, and maintaining department IIPP records.

X. CAMPUS SAFETY RESOURCES

A number of University programs and service organizations have been established to address injury and illness prevention and to maintain and promote a safe and healthful work environment for the campus community. A list is provided below, please use the Campus Telephone Directory for up-to-date telephone numbers.

Copy from safety manual hyperlinked document

XI. OTHER SAFETY RESOURCES

[CAL-OSHA](#) – Cal-OSHA web site

[CAL-OSHA General Industry Safety Orders](#) - information on California regulations

[Federal OSHA](#) – Federal OSHA web site

Appendix A

These forms are also obtainable on the Safety Bulletin Board Outside 4118 Etcheverry

Form 1 Report of Unsafe Condition or Hazard

Form 4 Hazard Correction Report

Form 5 Occupational Accident, Injury or Illness Investigation Report

Form 7 New Employee Safety Training Record

REPORT OF UNSAFECONDITION OR HAZARD

Department: _____

I. Unsafe Condition or Hazard

Name: (optional)_____	Job:_____
Title:_____	
Location of Hazard:_____	
Building:_____	Floor:_____ Room:_____
Date and time the condition or hazard was observed: _____	
Description of unsafe condition or hazard:_____	

What changes would you recommend to correct the condition or hazard? _____	

Employee Signature: (optional)_____	
Date:_____	

II. Management/Safety Committee Investigation

Name of person investigating unsafe condition or hazard: _____
Results of investigation (What was found? Was condition unsafe or a hazard?): (Attach additional sheets if necessary.) _____

Proposed action to be taken to correct hazard or unsafe condition: (Complete and attach a Hazard Correction Report, IIPP Form 4) _____

Signature of Investigating Party:_____
Date:_____

**IIPP - Form 1
Rev. 10/18/96**

Completed copies of this form should be routed to the appropriate supervisor and department Safety Committee, and must be maintained in department files for at least one year.

HAZARD CORRECTION REPORT

Department: _____

This form should be used in conjunction with the "Report of Unsafe Condition" form (IIPP Form 1), as appropriate, to track the correction of identified hazards.

All hazards should be corrected as soon as possible, based on the severity of the hazard. If a serious imminent hazard cannot be immediately corrected, remove personnel from the area and restrict access until the hazard can be addressed.

Supervisor/Safety Coordinator Name: _____ Telephone Ext.: _____

Supervisor/Safety Coordinator Signature

Date

Description and Location of Unsafe Condition	Date Discovered	Required Action and Responsible Party	Completion Date	
			Projected	Actual

OCCUPATIONAL ACCIDENT, INJURY OR ILLNESS INVESTIGATION REPORT

Department: _____		
Supervisor's Name/Phone: _____		
Person(s) involved: (include titles) _____		

Location: _____	Time: _____	Date: _____
Task being performed when accident occurred: _____		

NOTE: This form is intended to serve only as a local record of the investigation conducted within the department. Should an injury or illness occur, required forms must be submitted to the Department of Workers Compensation (DWC) as outlined in the Workers' Compensation Manual for Supervisors. Call 643-7921 if copies are not available in your department. Also, an IIPP Form 4, "Hazard Correction Report" must be completed in conjunction with any accident, injury or illness.

Describe the accident, illness, or injury and the probable root cause(s) of the incident. Include the nature of the injury or illness, any eyewitness accounts, and any property damage which may have occurred. Be sure to include the names and phone numbers of any witnesses. Attach a separate sheet if necessary.

Describe what corrective actions need to be taken to ensure this type of incident does not recur. Also, include the name(s) and phone number(s) of those who will ensure that these corrective actions are done in a timely manner.

Signature of Supervisor Conducting Investigation

Date

Signature of Department Safety Coordinator

Date

(Do not sign until a thorough review of the incident by the Safety Committee is complete and corrective actions are in place.)

IIPP—Form 5 Completed copies of this form must be routed to the Safety Committee and kept on file for at least one year.

NEW EMPLOYEE SAFETY TRAINING RECORD

Department: _____

Instructor/Supervisor: _____

This completed form should be retained in the individual's personnel file as evidence of initial training required under the Injury and Illness Prevention Program. Follow-up training covering more specific topics can also be documented by completing the space provided in item III below.

Employee Name: _____
Please Print)

New Hire Transfer Other: _____

Date of Hire / New Assignment: _____

I, _____, hereby certify that this employee has
(Instructor)
 been trained on the following: (Check appropriate boxes.)

I. Initial Training on Department's IIPP, Including: _____ Date: _____

- My right to ask any question, or report any safety hazards, either directly or anonymously without any fear of reprisal.
- The location of departmental safety bulletins and required safety postings (i.e., summary of occupational injuries and illnesses, and Safety and Health Protection Poster).
- Disciplinary procedures that may be used to ensure compliance with safe work practices.
- Reporting safety concerns.
- Accessing the department safety committee.
- Reporting occupational injuries and illnesses.

II. Hazard Communication Training _____ Date: _____

- The potential occupational hazards in the work area associated with my job assignment.
- The safe work practices and personal protective equipment required for my job title.
- The location and availability of MSDSs.
- The hazards of any chemicals to which I may be exposed, and my right to the information contained on Material Safety Data Sheets (MSDSs) for those chemicals.

III. Safety Training for 1140 Etcheverry Access _____ Date: _____

Describe Subject Covered: (Attach documentation.)

Radiation Safety Training:
 Signature & Date: _____ Instructor: _____

Explosives Storage & Safety Training:
 Signature & Date: _____ Instructor: _____

I understand the above items and agree to comply with safe work practices in my work area.

Employee Signature

Date

IIPP - Form 7

Completed copies of this form must be kept in Department files for at least one year.

Appendix B

Specified Program areas where Managers have responsibility identified by EH &S.

- **Chemical Inventory** Ensure that a chemical inventory report for every room or site (where hazardous materials are stored) is submitted to EH&S and that it is updated annually and whenever significant changes occur.
- **Emergency Response and Training Plan** Contribute to the development of the departmental/unit plan, ensure that all employees, students and others know about the plan, and communicate the importance of participating in drills and otherwise following procedures set out in the plan. Departmental records must be maintained up to three years indicating all employees who participate in emergency response training.
- **Environmental Permits** Equipment and operations involving underground storage tanks, regulated air emission sources, wastewater discharge or pre-treatment units, and hazardous waste treatment units must have operating permits, obtained via EH&S or Physical Plant-Campus Services (PP-CS). The user has the responsibility for providing relevant information to obtain permits, meeting permit conditions, and any fiscal responsibility. EH&S or PP-CS coordinate permit applications.
- **Fire Prevention Inspection** Upon receipt of a Fire Prevention Inspection Report, ensure that all noted issues and concerns are corrected as appropriate.
- **Groundwater Protection Program** Report any hazardous materials or other pollutants spilled to or discovered in soil or groundwater to EH&S for appropriate emergency or non-emergency clean up.
- **Hazard Communication Program** Except in chemical laboratories, a written Hazard Communication Program is required if hazardous materials are used or stored.

Implementation of the IIPP will satisfy the requirements of the Hazard Communication Program.

- **Hazardous Material and Waste Management** Inform employees and students that hazardous materials and hazardous waste, except as expressly authorized by regulations or campus licenses or permits, may not be disposed of via the sewer system, regular trash, fume hoods or other unsafe or environmentally damaging routes; and to stress the importance of proper hazardous material/waste management.
- **Hazardous Material Spills and Releases** Report immediately to EH&S or after business hours to the UC Police Department (UCPD), any hazardous material (except radioactive) spills or releases

that could result in exposure of individuals or in a release outside the laboratory or other location where these materials are stored or used. Report to EH&S (or UCPD after business hours) any spills that cannot be cleaned up promptly and any spills that result in injury. The Manager must ensure that :

1. Appropriate spill containment and cleanup materials are readily accessible to operations under her or his control.
 2. Employees/students in the workplace or laboratory know where the spill response materials are and know what to do in case of a spill or release.
 3. EH&S (or the UC Police Department) has been promptly notified about spills and releases occurring in operations under the manager's control.
- **Hazardous Material/Waste Management - Laboratory** Unwanted hazardous material/waste from chemical manipulations carried out on a laboratory scale where multiple chemical procedures or chemicals are used must be pre-packaged by the producer. A completed material packing list fully describing the unwanted materials must be provided to EH&S to assist in classifying hazardous waste prior to pick-up.
 - **Hazardous Material/Waste Management - Non-Laboratory** Unwanted hazardous waste generated by Physical Plant and other facilities that are not laboratories and not under control of academic departments and that do not directly support a laboratory operation must be pre-packaged by the producer. A completed material packing list fully describing the unwanted materials must be provided to EH&S to assist in classifying hazardous waste prior to pick-up. In addition, these non-laboratories must establish satellite or waste accumulation areas and manage waste in compliance with Federal and state regulations/laws. EH&S is available for assistance in proper hazardous waste management.

Hazardous Waste Minimization Ensure that work being carried out in their operations is performed in a manner which prevents or reduces hazardous waste generation at the source and that when it cannot be prevented, it is managed in an environmentally safe manner. Methods of preventing or reducing hazardous waste generation include substituting non-hazardous or less hazardous materials for hazardous ones; making operational improvements, instituting changes in processes, methods or techniques; and reusing and recycling materials.

- **Laboratory Safety Program** Ensure that a Chemical Hygiene Plan for laboratory safety, where hazardous chemicals are stored or used, is developed, implemented and coordinated with the departmental IIPP.
- **Risk Management & Prevention Program** Ensure that purchases of acutely hazardous materials maintain building aggregate quantities to below threshold planning quantities. If those levels are exceeded, ensure that a RMPP is completed prior to use.
- **Special Materials (carcinogens or biohazards) Use** Know which people under their supervision use any of the special materials noted above. Obtain required authorizations or submit the required registration information, as applicable, for special materials.

- **Biohazards** Obtain a Biohazard Use Authorization (BUA) and ensure that anyone using non-exempt recombinant DNA, hazardous etiologic agents or oncogenic viruses has been listed on the BUA. Ensure that work is carried out in accordance with applicable laws, regulations and policies and the conditions contained in the BUA. EH&S can offer assistance in determining whether a BUA is required.
- **Carcinogens** Ensure that "regulated carcinogens" have been registered with EH&S; that all individuals working with "select carcinogens" [more inclusive than "regulated carcinogens"] have been properly trained and are provided with appropriate protective equipment or engineering controls; and that procedures for the safe management of carcinogens are followed.
- **Training** Ensure that everyone working in their operations is appropriately trained to identify and mitigate potential hazards.
 1. Determine and ensure appropriate training for those working under their supervision. Contact the appropriate departmental person (such as a safety officer) or EH&S as needed. Additional curriculum must be developed when new processes, procedures or equipment are introduced to the work site.
 2. Ensure that work requiring training is performed only by persons who have received the proper training.
 3. Document all training and know where records are retained.