



HAZARDOUS MATERIALS MANAGEMENT PROGRAM

Section 4. Ancillary Components

CONTENTS

- 1.0 PURPOSE
- 2.0 EMPLOYEE TRAINING
 - 2.1 Laboratory Safety Course
 - 2.2 Laboratory Refresher Training
 - 2.3 Standard Operating Procedures
 - 2.4 Bloodborne Pathogens
- 3.0 EMPLOYEE COMMUNICATION
- 4.0 HAZARD ASSESSMENT AND CONTROL
 - 4.1 Self Inspections
- 5.0 EMPLOYEE HEALTH AND WELFARE
 - 5.1 Medical Surveillance & Exposure Monitoring
 - 5.2 Worker's Compensation
- 6.0 PERSONAL PROTECTIVE EQUIPMENT EVALUATION
- 7.0 RESPIRATORY PROTECTION PROGRAM
- 8.0 RADIATION SAFETY PROGRAM
- 9.0 FIRE/LIFE SAFETY
- 10.0 APPROVAL AND REVIEW

1.0 PURPOSE

The purpose of this section is to outline all applicable and adjunct programs that may be required for full compliance of the regulations and standards referenced in the *Introduction*.

2.0 EMPLOYEE TRAINING

Employees working with hazardous materials in laboratories must be provided training as mandated by the Occupational Health and Safety Administration (OSHA). The employer must ensure that training is provided in the following areas where appropriate:

- Laboratory safety;
- Annual laboratory safety refresher;
- Standard Operating Procedures for substances, processes, procedures and/or equipment;
- Revised SOPs; and
- Bloodborne Pathogens.

2.1 Laboratory Safety Course

All laboratory personnel working with hazardous materials, biological agents, bloodborne pathogens, radiation, and research animals must complete the Introduction to Laboratory Safety course prior to initial assignment. The course schedule is available at <http://srm.usc.edu/PDevReg/Courses/courses.htm> or in the Spring/Fall Professional Development Course List.

Course topics include the following:

- Hazardous material safety
- Warning labels and color coding
- Hazardous material storage
- Material Safety Data Sheets
- Waste disposal guidelines
- Emergency response
- Medical surveillance
- Personal Protective Equipment
- Hazardous material labeling requirements
- Spill procedures
- Recordkeeping requirements
- Methods to reduce exposure

2.2 *Standard Operating Procedures*

Laboratory personnel must be trained on lab-specific procedures and associated hazards by the Principal Investigator, Laboratory Manager, or designated person. Training is also required when procedures are revised. A record of the training must be available for inspection. Use the training form available in the Forms section. See Section 3: Standard Operating Procedures.

2.3 *Laboratory Refresher Training*

Subsequent Laboratory Refresher Training will be provided annually by the Principal Investigator, Laboratory Manager, or other designee. Topics must cover lab specific hazards and precautions.

Suggested training topics include:

- **Identification of Hazards:** Discuss potential radioactive, chemical, biological, and other hazards in the laboratory;
- **General Epidemiology:** Explain the modes of transmission of hazardous;
- **Protective Measures:** Discuss measures to protect personnel from laboratory hazards including appropriate work practices, emergency procedures, and personal protective equipment to be used;
- **Material Safety Data Sheets:** Review applicable MSDSs;
- **Exposure Control Plan:** Review the University's Exposure Control Plan;
- **Ordering Radioactive Material:** Review procedures for ordering radioactive material;
- **Radioactive and Carcinogenic Material Inventory Control:** Review inventory, inventory protocol, work area(s) where material is used, and storage location(s);
- **Waste Disposal:** Review proper disposal procedures for hazardous waste. Include proper segregation, appropriate containers, labels, and proper recordkeeping procedures;
- **Contamination Control:** Review the designated work area, selection of appropriate survey methods and instrumentation, monitoring frequency, and decontamination procedures;
- **Record Keeping Procedures:** Review recordkeeping procedures such as Material Usage Records, Disposal Record forms, Wipe Test results, and Chemical Inventory;
- **Personnel Dosimeters:** Review proper use and care of personnel dosimeters, proper return of badges to Laboratory Safety, and reporting procedures for lost/damaged badges;
- **Security:** Discuss ways to secure hazardous materials;
- **Use of Portable Survey Instruments:** Demonstrate the proper use of portable survey instruments;
- **Emergency Notification and Response:** Discuss procedures for responding to and reporting accidents and incidents;
- **Food in Laboratories:** Reinforce restriction of food in any laboratory where hazardous materials are present;
- **Safety Meetings:** Review and discuss past inspection results, accidents, and spills; and
- **Ergonomics:** Discuss and evaluate laboratory ergonomics.

2.4 Bloodborne Pathogens

See Section 2 Biological Safety, Bloodborne Pathogens.

3.0 EMPLOYEE COMMUNICATION

Employers must communicate safety hazards and protective measures to their employees. Safety meetings provide a forum to discuss safety issues in the laboratory. Discussion may include the following:

- Recent accidents and prevention methods;
- Potential hazards found in the laboratory;
- Review of recent safety inspection violations;
- Emergency procedures including evacuation sites; and
- Personal protective equipment needs.

Document the safety meetings using the form in the Forms section.

4.0 HAZARD ASSESSMENT AND CONTROL

Hazard assessment to identify potentially hazardous conditions in the workplace is required under OSHA guidelines. The EH&S Safety Assessment Program conducts safety inspections of University laboratory spaces to promote the following objectives.

- Maintain facilities and equipment in a safe operating condition;
- Provide a comfortable and safe working environment for USC employees, visiting scholars, and volunteers;
- Ensure that all laboratory procedures and experiments are conducted in a safe manner;
- Gain further understanding of jobs and tasks;
- Identify existing and potential hazards;
- Monitor hazard controls (personal protective equipment, engineering controls, policies, procedures);
- Recommend corrective action; and
- Ensure proper documentation and programs are in place, i.e. HMMP, MSDS, chemical inventory, training records.

Once the audit is complete, the Principal Investigator and/or Lab Manager will receive an electronic copy of the results and are required to respond to the deficiencies. Based on the severity of the hazards found, a follow-up visit will be conducted. Past reports are available by contacting EH&S.

4.1 Self Inspections

See IIPP pg. 4 for more information. Use the laboratory inspection checklist in the Forms section.

5.0 EMPLOYEE HEALTH AND WELFARE

5.1 Medical Surveillance

Medical surveillance and exposure monitoring are required for employees working with or exposed to Prop 65 chemicals, highly toxic materials, bloodborne pathogens (see Section 2 Biological Safety), or using respiratory protection in their work. Employees working with radioactive isotopes of iodine must be monitored through thyroid and urine bioassays (See Radiation Safety; cite reference).

5.2 *Exposure Monitoring*

5.3 *Worker's Compensation*

Employees who are injured while working must have the **Supervisor's Report of Injury and Worker's Compensation** forms completed and filed with the University's Worker's Compensation/Disability group. More information is available at <http://capsnet.usc.edu/WC/index.cfm>.

6.0 *PERSONAL PROTECTIVE EQUIPMENT EVALUATION*

Proper PPE is required when handling hazardous materials. A step-by-step approach to evaluating eye, face, skin, and foot protection is provided in this program.

Cite reference

7.0 *RESPIRATORY PROTECTION PROGRAM*

Respiratory protection may be necessary when engineering controls are nonexistent or do not provide adequate protection against inhalation hazards. Medical surveillance and fit testing of respirator equipment is required under OSHA law for employees who use this protection.

<http://capsnet.usc.edu/EHS/OccupationalSafety/RespiratoryProtection/index.cfm>

8.0 *RADIATION SAFETY PROGRAM*

<http://capsnet.usc.edu/LabSafety/RAD/index.cfm>

9.0 *FIRE/LIFE SAFETY*

Cite reference

10.0 *APPROVAL AND REVIEW*

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