Laboratory Employee Information and Training Program

Purpose

This program outlines the training that will be provided at initial assignment and training on the standard operating procedures developed by each laboratory or research unit.

Scope

This policy and program applies to all Western Michigan University employees, including full time, part time, temporary and student employees who are involved in or supervise the laboratory use of hazardous chemicals.

Definitions

**Permissible Exposure Limit (PEL):** The MIOSHA airborne exposure limit for chemicals—either 8-hour time weighted averages (TWA’s) or short-term exposure limits (STEL’s) to which no employee shall be exposed.

**Threshold Limit Value (TLV):** An airborne concentration guideline suggested by the American Conference of Governmental Hygienists of a substance for which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.

Responsibilities

A. **Office of Environmental Health and Safety (EHS):**
   1. Provide training as required by the Lab Standard to newly hired employees on the contents of the Chemical Hygiene Plan (CHP).
   2. Maintain a library of manufacturer’s Safety Data Sheet (SDS), PEL’s and other laboratory and chemical safety literature.

B. **Deans and Directors:**
   1. Ensure that each new laboratory worker receives training on the CHP and laboratory-specific standard operating procedures (SOP’s).
   2. Ensure that each laboratory unit develops laboratory-specific standard operating procedures.

C. **Laboratory Supervisors**
   1. Develop and update standard operating procedures particular to the laboratory experiments.
   2. Ensure EHS has copies of SDS’s if received with chemical shipments.
   3. Provide an initial orientation and train employees on lab specific procedures and chemical hazards.
4. Forward to EHS the written record stating that each laboratory worker has reviewed appropriate laboratory/departmental SOP’s and other related health and safety policies and guides.

D. Laboratory Workers
   1. Follow standard operating procedures.
   2. Attend training on the CHP and SOP’s.
   3. Refrain from the operation of any equipment or instrumentation without proper instruction and authorization.
   4. Request information and training when unsure how to handle a hazardous chemical or conduct a laboratory procedure.

Requirements

A. Information:
   1. An orientation must be provided at the time of an employee’s initial assignment in a work area where hazardous chemicals are present and prior to any assignment involving new exposure situations.
   2. Employees should receive periodic refresher information and training to ensure that they are aware of the risks of exposure to hazardous chemicals.

B. Laboratory Specific Standard Operating Procedures:
   1. Contents of Laboratory Specific Standard Operating Procedures. See Appendix A for forms to assist.
   2. Location and types of available personal protective equipment (PPE).
   3. Location of available spill equipment and instructions for use.
   4. Emergency phone numbers for the laboratory.
   5. A list of select carcinogens, reproductive toxins, and substances that have a high degree of acute or chronic toxicity that are stored or handled in the laboratory.
   6. The special handling requirements and protocols for highly hazardous chemicals.
   7. Requirements
   8. A standard operating procedure (SOP) is a set of written procedures explaining how to safely work with hazardous chemicals or equipment.
   9. SOP’s are required additions to the Chemical Hygiene Plan (CHP) in any laboratories engaging in processes/activities not covered by the CHP. See Appendix A for the form to assist in creating the lab-specific SOP.
   10. SOP’s are not needed for processes/chemicals already covered in the CHP.
   11. All principle investigators must complete the sheet containing basic safety information specific to the lab even if all other processes are covered by the CHP.

C. Content of EHS new hire training:
   1. Methods and observations that may be used to detect the presence or release of hazardous chemicals. Examples of detection methods include visual appearance, odor, monitoring performed by EHS and an understanding of chemical monitoring devices.
   2. Physical and health hazards of chemicals.
3. Permissible exposure limits (PEL’s) for MIOSHA regulated substances, or the recommended exposure limits for other hazardous chemicals or threshold limit values (TLV’S) if no applicable MIOSHA standard is available.
4. Signs and symptoms associated with exposure to the hazardous chemicals found in the lab.
5. Work practices, PPE, and emergency procedures to be used to ensure that the employee may protect himself/herself from overexposure to hazardous chemicals.
6. The content of the Lab Standard and the Chemical Hygiene Plan.
7. The relevant Safety Data Sheet (SDS) information and location of SDS’s.

D. Content of laboratory specific orientation and training
   1. Review of site-Specific SOP’s.
   2. Review of specific physical and health hazards of chemicals in the work area.
Appendix A

Laboratory Specific Standard Operating Procedures

Western Michigan University - Environmental Health and Safety

Please fill out the forms, print on your local printer, place in your Chemical Hygiene Plan, and mail copy to EHS - Mail Stop 5485.

Basic Information

Date: Principal Investigator:

Room & Building: Phone Number:

Emergency Contact Information:

Location and Types of Personal Protective Equipment:

Location and Types of Spill Equipment:

Location of Safety Data Sheets (SDS):
- WMU’s EHS – SDS Website
- Call EHS office at (269) 387-5590
- Ernest Wilbur Building (EWB)

Highly Hazardous Materials in lab:
Processes not covered under the WMU Chemical Hygiene Plan

Section 1: Describe Process, Hazardous Chemical or Hazard Class.

Section 2: Potential Hazards.

Section 3: Personal Protective Equipment.

Section 4: Engineering Controls.

Section 5: Special Handling and Storage Requirements.

Section 6: Spill and Accident Procedures.

Section 7: Decontamination Procedures.

Section 8: Waste Disposal Procedures.