

Laboratory Safety Program

Effective Date: January 2011

Revised Date: January 2013

Responsible Department: Environmental Health and Safety

Related Policy:

851.08.17, Laboratory Safety

Intent

To outline the scope and components of the Laboratory Safety program and prescribe the associated responsibilities of department leaders, laboratory supervisors and laboratory personnel.

Responsibilities

1. Department Managers/Directors
 - a. Identify laboratory supervisors and ensure that they clearly understand their responsibilities under the Occupational Health and Safety Act as well as University policies and procedures including the Laboratory Safety Program;
 - b. Ensure that all design, construction, renovation or decommissioning of a laboratory or chemical storage area in their department is done with thorough consideration of all health and safety aspects and in consultation with EHS as necessary;
 - c. Ensure that chemical storage areas and other “common” rooms/area within the department are managed and maintained accordingly to ensure compliance with applicable regulations, University policies and this program;
 - d. Ensure that this program is implemented in the department.
2. Laboratory Supervisors/Principal Investigators
 - a. Implement this program in their laboratory;
 - b. Ensure all laboratory personnel under their charge understand their responsibilities as part of this program;

- c. Ensure all laboratory personnel under their charge participate in all required safety training and ensure that training on specific hazards in their laboratory is provided;
- d. Ensure training of laboratory personnel is documented and that this documentation is maintained;
- e. Ensure that all laboratory personnel have ready access to the laboratory safety manual and MSDS's for the hazardous materials with which they will be working;
- f. Ensure that all hazardous materials are labeled as required by *WHMIS* regulations;
- g. Ensure that chemical and biological exposures are minimized through appropriate and consistent use of engineering controls (e.g. fume hoods, biosafety cabinets);
- h. Ensure that the chemical inventory for the laboratory or other workspace for which they are responsible is entered and maintained in the EHS chemical inventory system;
- i. Provide written safety procedures for activities involving hazardous equipment, materials, or procedures in the laboratory as required;
- j. Prescribe the appropriate personal protective equipment required in their laboratory. Provide and enforce the use of this personal protective equipment in the laboratory;
- k. Ensure that all appropriate safety equipment is accessible, operational and locations and operating procedures are known to laboratory personnel;
- l. Implement and enforce laboratory safety rules for all laboratory personnel and visitors;
- m. Provide for and enforce the proper disposal of chemical wastes;
- n. Report all incidents to OHW within 24 hours. Report all critical injuries to EHS immediately;
- o. Ensure that upon vacating of a lab for renovation, relocation or retirement purposes, the laboratory is decommissioned accordingly.

3. Laboratory Personnel

- a. Participate in training as prescribed by laboratory supervisors, departmental policies, or the EHS training matrix;
- b. Be familiar with the hazards and safety procedures for work performed in the laboratory, along with the locations of such information (e.g. MSDSs)
- c. Be familiar with WHMIS labeling requirements and use accordingly;
- d. Use appropriate personal protective equipment and laboratory safety equipment;
- e. Work in accordance with laboratory, departmental and University health and safety policies and procedures;
- f. Follow proper waste disposal procedures;
- g. Report all incidents, near misses and unsafe conditions immediately to the supervisor.

4. Environmental Health and Safety

- a. Provide technical advice and recommendations to the University community on matters related to health and safety in the laboratory;
- b. Provide training opportunities to the University community on general laboratory safety topics;
- c. Provide written standards/procedures for general laboratory safety topics and review these accordingly;
- d. Investigate incidents related to health and safety in laboratories;
- e. Arrange industrial hygiene monitoring in laboratories as required;
- f. Manage collection and disposal services of hazardous waste in accordance with all applicable legislation;
- g. Audit the effectiveness of this program on a regular basis.

Laboratory Safety Manual

Environmental Health and Safety will make available a Laboratory Safety Manual outlining minimum standards, procedures and safety precautions for general laboratory operations. This manual will be reviewed at least every three years.

Training

Environmental Health and Safety will make available regular training opportunities on general laboratory safety topics.

Laboratory Safety Program Audit

Environmental Health and Safety will audit various components of this program on a periodic basis.

The components of the audit will include but are not limited to:

- Inspections of the laboratories to assess compliance with this program;
- Review of training records to confirm that laboratory personnel have had sufficient lab safety training corresponding to the workplace specific hazards.

Audit findings will be reported to the laboratory supervisor and department chair/manager.

Glossary of Terms:

Critical injury – those injuries that meet at least one of the following criteria:

1. place life in jeopardy;
2. produce unconsciousness;
3. result in substantial loss of blood;
4. involve fracture of a leg or arm but not a finger or toe;
5. involve amputation of a leg, arm, hand or foot, but not a finger to toe;
6. consist of burns to a major portion of the body; or
7. cause the loss of sight in an eye.

(R.R.O. 1990, Reg. 834 as am. O. Reg351/91)

EHS – Environmental Health and Safety

incident – an event that results in injury to people and/or damage to the environment, equipment, property and/or material.

injury – an event that results in physical harm to an employee.

laboratory – for the purposes of this policy, a laboratory is considered to be any space where scientific research, experimentation or analysis is conducted. Computer “labs” are excluded from this definition.

laboratory personnel – any employee, student or visitor conducting scientific research, experimentation or analysis within a laboratory.

laboratory supervisor – a person who has charge of a laboratory or authority over

laboratory personnel

MSDS – Material Safety Data Sheet

near miss – an event that under different circumstances could have resulted in physical harm to an individual or damage to the environment, equipment, property and/or material.

OHW– Occupational Health and Wellness

supervisor – a person who has charge of a workplace or authority over a worker. (Ontario OH&S Act Section 1(1))

WHMIS – Workplace Hazardous Materials Information System