



# A Safety Orientation Guide for Faculty with Laboratory Responsibilities

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2008 Edition

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# 1. Internal Responsibility and Due Diligence

In Ontario, health and safety legislation is founded upon the internal responsibility system. This system mandates the joint participation of workers and employers with equal powers to act on health and safety matters. The components of the system include:

- *The right to know* - employees must be aware of all hazards in the workplace and be trained in how to control them.
- *The right to participate* - employees have the right to be consulted about health and safety matters and to participate on workplace joint health and safety committees.
- *The right to refuse unsafe work* - all employees have the right to refuse work they believe to be unsafe.

## 1.1 University of Guelph Safety Policies, Programs and Procedures

The University of Guelph [safety policies](#), programs and procedures apply to the many diverse work environments encountered at the University including research, teaching and service laboratories.

## 1.2 The Concept of the Competent Supervisor

As defined by the Ontario Occupational Health and Safety Act (OHSA), a supervisor is a person who has charge of a workplace or authority over workers. Under this definition most faculty are supervisors having authority over their lab personnel and charge of their lab space.

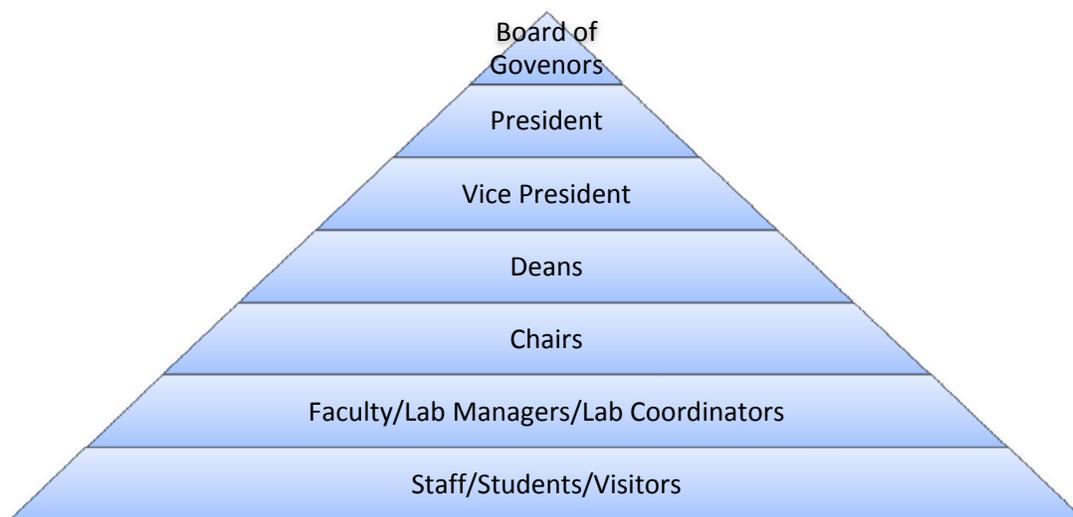


Figure A. Basic Structure of the Internal Responsibility System as applicable to Faculty with Laboratory Responsibilities at the University of Guelph

Persons appointed as supervisors must be competent as defined by the Occupational Health and Safety Act.

*A competent person* is one:

- who is qualified because of knowledge, training, and experience to organize the work and its performance;
- is familiar with the OHSA and the regulations which apply to the work; and
- has knowledge of any potential or actual danger to health or safety in the workplace.

Supervisors must show due diligence. In other words supervisors are required to take every precaution reasonable in the circumstances for the protection of a worker.

## 2. Legislation

Faculty members with supervisory responsibilities must be familiar with the various government acts, regulations and bylaws as well as University of Guelph safety policies that govern the operations at the University of Guelph.

Employment law applicable in Ontario includes the Employment Standards Act, the Human Rights Code, and the [Occupational Health and Safety Act and Regulations](#). Supervisors are responsible for being familiar with the requirements of these pieces of legislation.

Brief summaries of pertinent safety legislation are listed below. Further information concerning the Employment Standards Act and the Human Rights Code can be obtained from the Employee Relations section of Human Resources.

### 2.1 Demonstrating Due Diligence under the Occupational Health and Safety Act (OHSA) and Regulations

OHSA (the Act), enforced by the Ministry of Labour, governs the management of safety in Ontario workplaces. The Act prescribes duties of employers, supervisors and workers, the composition and function of workplace joint health and safety committees, exposure limits for various hazardous substances, requirements for first aid training, and various other programs. It also describes the rights of Ministry of Labour inspectors to enter workplaces and place orders against employers or lay charges against employers, supervisors, and, although rare, workers. These charges can result in fines and/or jail terms. The University cannot indemnify supervisors for convictions under the Occupational Health and Safety Act and Regulations. If charges are laid under the Act and Regulations for non-compliance, then the defendant must be able to show that he/she was duly diligent. There must be written records

such as inspections, standard operating procedures, records of training, etc. There must also be a record of enforcement of policies, i.e. records of disciplinary action against people who have not followed safety policies. For further information on due diligence and its requirements, contact Environmental Health and Safety, ext.53282.

The Ontario Occupational Health and Safety Act and Regulations prescribe minimum requirements for the employer to ensure safety in the workplace. Some of these requirements can be quite detailed as is the case for confined space entries. Under the Act, the supervisor (i.e. faculty member or principal investigator) has the responsibility to ensure that:

- There is compliance with the Occupational Health and Safety Act and Regulations and University Safety Policies by all occupants of the laboratory, including faculty, staff, students, and visitors.
- Laboratory personnel are aware of the hazards and are properly trained so they can perform their work safely. This training must address risks specific to the particular laboratory.
- Laboratory personnel are provided with appropriate materials, resources, and personal protective equipment.
- All laboratory equipment is maintained in safe working order.

Administrative functions in which Faculty may be involved include serving on the University's Joint Health and Safety Committee or departmental safety committees, performing workplace inspections, serving as the departmental safety officer, investigating incidents, etc.

All employees including post doctoral fellows, research associates/assistants, graduate students, summer students, technicians, etc., and any unpaid volunteers such as visiting scientists must ensure that:

- safety training, resources, and personal protective equipment are received, and used as required;
- all hazardous situations, unsafe working conditions, and unsafe behaviours are immediately reported to their supervisor.;
- work is performed in a safe manner to protect themselves and others and;
- University safety policies, programs and procedures are followed consistently.

## **2.2 Workplace Hazardous Materials Information System (WHMIS)**

WHMIS is national system designed to ensure that workers are knowledgeable about hazardous products in the workplace. WHMIS consists of three key elements:

- Material Safety Data Sheets (MSDS)
- Labels
- Education/Training

Supervisors must ensure that:

- Up-to-date MSDSs for all hazardous materials are available for immediate use by all laboratory personnel. This has been simplified at the University through the introduction of MSDS online, an electronic database of the current MSDS's for all hazardous materials on campus. (<http://hq.msdsonline.com/uoguelph/Search/Default.aspx>)
- Containers of hazardous products are labelled according to WHMIS legislation.
- All individuals working with, or in close proximity to hazardous materials, have received generic and laboratory-specific WHMIS training.

For more information on WHMIS training at the University of Guelph please refer to [Section 3](#).

### **2.3 Ontario Environmental Protection Act**

The Environmental Protection Act is broad in scope and demands that everything reasonably possible is done to protect and/or enhance the environment. Laboratory supervisors shall take all reasonable actions to prevent or minimize the impact of the following:

- Spills of hazardous materials.
- Releases of pollutants to the natural environment.
- Amount of waste (hazardous and non-hazardous) produced.

Laboratory supervisors are responsible for managing hazardous wastes produced in their laboratories and training laboratory personnel in appropriate procedures. Please refer to the Laboratory Safety Manual for more information.

### **2.4 Ontario Fire Code**

As part of the University of Guelph Fire Prevention program, fire extinguishers are provided in every laboratory. These must be clearly visible and unobstructed at all times. Laboratory personnel are to know the location and proper use of all fire extinguishers in their work areas. They must also know the evacuation procedure and exit route out of the building. Evacuation routes shall be posted in the lab. Please refer to the Fire Prevention website: <http://www.fire.uoguelph.ca/index.html> and the Laboratory Safety Manual for more information.

Storage of flammable and/or combustible liquids in the laboratory must be kept to a minimum in accordance with limits in the Ontario Fire Code. Flammable or combustible liquids which require refrigeration must be stored in refrigerators or freezers specifically designed for the storage of such materials. Flammable and combustible liquids not required for immediate use must be stored in approved flammable storage cabinets or flammable liquid storage rooms. Please refer to the Laboratory Safety Manual for more information.

## **2.5 Nuclear Safety and Control Act (NSCA)**

All use of radioactive materials is regulated by the Nuclear Safety and Control Act through the Canadian Nuclear Safety Commission. The University of Guelph has been issued a license which permits the use of radioactive materials, taking into account the issues of health, safety, security, and protection of the environment. Faculty members wishing to purchase, transfer, receive, use, or store any radioactive material must be authorized to do so. Authorization to use radioactive material is given in the form of a Radioisotope Project Permit - see Safety Policy 851.09.01 Radiation Safety:

<http://www.uoguelph.ca/ehs/policies/09-01.pdf>

## **2.6 Occupational Health and Safety Act, Regulation 861, R.R.O. 1990, X-Ray Safety and Radiation Emitting Devices Act**

The use of x-rays in Ontario is regulated by provincial legislation. The Occupational Health and Safety Act regulates the use of analytical equipment such as x-ray diffraction machines. X-ray equipment used in the Veterinary Teaching Hospital is also regulated by the Radiation Emitting Devices Act.

## **2.7 Transportation of Dangerous Goods Act (TDGA) and Regulations**

The movement of hazardous materials by motorized transport (road, air, marine, and rail) is regulated federally. Anyone shipping or receiving hazardous materials or transporting them on public roads must be trained and subsequently issued a certificate of training by the University. TDG training courses are provided on-line through Environmental Health and Safety. Further information about TDG may be obtained from Environmental Health and Safety at x56401 or Mail Services at x52264 - see safety policy 851.08.10 Transportation of Dangerous Goods:

<http://www.uoguelph.ca/ehs/policies/08-10.pdf>

## **2.8 City of Guelph Sewer Use Bylaws**

Any materials placed in laboratory drains discharge to the city sanitary sewers. All such discharges must be in accordance with the city sewer use bylaw.

The current bylaw may be obtained online at:

[http://www.guelph.ca/uploads/PDF/By-laws/sewer\\_use.pdf](http://www.guelph.ca/uploads/PDF/By-laws/sewer_use.pdf)

For more information refer to the Laboratory Safety Manual or contact Environmental Health and Safety at x56401.

## 3. Safety Orientation and WHMIS Training

### 3.1 Program Content

Safety orientation is a required component of any orientation program designed to introduce new employees and visitors to the University. In addition to a general introduction to the University, all new employees must receive safety orientation training prior to the commencement of work. The laboratory supervisor (faculty member/principal investigator) is required to provide information and instruction to the laboratory personnel under his/her supervision, (technicians, graduate students, project-work students, visiting scientists, etc.), regarding all workplace hazards. Workplace hazards may include chemical hazards; biological hazards including infectious organisms and zoonotic disease; physical hazards such as noise, pressure, electrical, heat, and cold; radiological hazards such as ionizing and non-ionizing radiation; and work practices such as working alone or at remote sites.

Safety training for each employee must be documented and the written records kept in the workplace - see Safety Policy 851.06.10, Safety Orientation and Training:

<http://www.uoguelph.ca/ehs/policies/06-10.pdf>.

Safety orientation training consists of general training applicable to all laboratory personnel and laboratory-specific training which focuses on the particular hazards and control measures in individual laboratories.

General safety topics include (but are not limited to):

- The Occupational Health and Safety Act and Regulations.
- University of Guelph's safety policies, programs and procedures.
- Emergency procedures and incident reporting.
- EHS safety resources.
- WHMIS introduction.
- Fume hoods.
- Use and limitations of fire extinguishing equipment.
- Use and limitations of personal protective equipment.
- General chemical hazards and storage practices.

Laboratory-specific training includes (but is not limited to):

- Detailed hazardous materials training specific to the materials in the lab.
- Use of specialized equipment such as centrifuges, autoclaves and biocontainment cabinets.
- SOPs (Standard Operating Procedures).
- Requirements regarding designated substances in Ontario including medical surveillance programs – please refer to the Laboratory Safety Manual for more information.
- Emergency procedures, i.e. medical emergency, fire, chemical response loss of power, etc.

## 3.2 Delivery of Training

### 3.2.1 General Safety Orientation Training

As a service to the University community, Environmental Health and Safety provides generic “Safety Orientation and WHMIS” seminars at the beginning of each semester. This training is also available to take online. Training schedules and registration information can be found on the EHS website.

### 3.2.2 Laboratory Safety Orientation Training

Environmental Health and Safety also provides a Laboratory Safety course. Training schedules and registration information can be found on the EHS website.

The Laboratory Supervisor is responsible for training on hazards of the specific laboratory.

All training initiatives must be documented in writing and records kept by the laboratory supervisor and/or in departmental personnel files. Such records must be available to a Ministry of Labour inspector upon request.

Training in the use of fire extinguishers is available on request from Fire Prevention. Requests can be made at the following website:

<http://www.fire.uoguelph.ca/requests.php>.

## 3.3 Training Resources

WHMIS and other safety training videos (DVD and video format) can be borrowed from EHS. Contact EHS at x53282 or refer to the following website for more information:

<http://www.uoguelph.ca/ehs/uploads/2008/05/videos.pdf>.

## 4. Working with Ionizing and Non-Ionizing Radiation

### 4.1 The University Radiation Safety Committee and Radiation Safety Officer

The University Radiation Safety Committee and the Radiation Safety Officer (RSO) are responsible for ensuring that:

- The University handles any radioactive materials and x-rays in accordance with all applicable legislation.
- All persons who work with radioactive materials and x-rays are trained.
- Proper protocols are established when working with, or near, radioactive materials and x-rays.

The following policies address general radiation safety and ionizing radiation devices.

- [Safety Policy 851.09.01 Radiation Safety](#)
- [Safety Policy 851.09.02 X-Ray Equipment and Ionizing Radiation Devices](#)

The Radiation Safety Officer can also supply advice regarding the use of non-ionizing radiation such as UV, microwaves, and lasers.

- [Safety Policy 851.09.04 Non-ionizing Radiation Safety](#)
- [Safety Policy 851.09.05 Lasers](#)

For more information contact the RSO at x54888.

## **4.2 Radioisotope Project Permit**

Use of radioisotopes at the University is managed through a permit system. Principal investigators must apply for a Radioisotope Project Permit prior to purchasing, using, storing, or transferring radioactive materials. Prior to issuing a permit, a completed application form must be sent to the Radiation Safety Officer who will then meet with the applicant to discuss the requirements of the proposed research activities. There may also be a subsequent inspection of the specific laboratories where the research will be conducted to determine the whether or not the space is suitable for the proposed work. All persons using x-ray emitting equipment and certain radioisotopes are required be enrolled in the dosimetry service. The dosimetry service is managed by Environmental Health and Safety at no charge to the individual laboratories or departments.

## **4.3 Radiation Safety Training**

All individuals working with radioactive materials and x-rays are required to participate in the Radiation Safety seminar offered by Environmental Health and Safety. The seminar is offered on a regular basis several times per semester. Topics cover basic radiation protection for ionizing radiation, potential hazards, external/internal protection techniques, dosimetry service, instrumentation, contamination monitoring, inventory control, waste management and the University of Guelph policies and procedures. This training must be taken every 18 months while working with radioactive materials. Please register on-line at:

<http://www.uoguelph.ca/ehs/training/online-course-registration/> .

In addition to the generic radiation safety training, individuals must be trained by the Principal Investigator in radiation protection techniques specific to each procedure.

## 5. Working with Biohazardous Materials

### 5.1 The University Biosafety Committee

The University Biosafety Committee and the Biosafety Officer in Environmental Health and Safety are the advisory body responsible for ensuring that proper protocols are established when working with, or near, biohazardous materials at the University of Guelph.

### 5.2 Biohazard Project

A Principal Investigator intending to work with biohazardous materials must apply for a Biohazard Containment Certificate prior to commencing work with biohazardous materials. The forms and explanatory materials are available online at the EHS website:

<http://www.uoguelph.ca/ehs/forms/sorted-by-subject/>.

Helpful materials such as samples of completed forms, standard operating procedures, material specific to a particular biohazard and other resource materials are available by contacting EHS at x53282.

The completed application will be reviewed by the Biosafety Officer and Chair of the Biosafety Committee prior to approval. Please allow 3 weeks for processing.

### 5.3 Biosafety Training

The Principal Investigator is responsible for training all persons working with biohazards under his/her supervision. All training must be documented in writing. A sample biohazard training checklist is available from the Biosafety Officer at x 53190.

### 5.4 Biosafety Resources

The principal guidelines used in Canada are the [Laboratory Biosafety Guidelines](#) (3rd edition, Health and Welfare Canada):

[http://www.phac-aspc.gc.ca/publicat/lbg-ldmbl-04/pdf/lbg\\_2004\\_e.pdf](http://www.phac-aspc.gc.ca/publicat/lbg-ldmbl-04/pdf/lbg_2004_e.pdf)

As well, there are [Veterinary Containment Standards](#) (Canadian Food Inspection Agency):

<http://www.inspection.gc.ca/english/sci/lab/convet/convete.pdf>

EHS also maintains files of other resource material related to biohazards. Contact the Biosafety Officer at x53190 for more information.

## **6. General Laboratory Safety**

### **6.1 Laboratory Safety Manual**

The Laboratory Safety Manual contains information on general laboratory safety issues including chemical hazards, storage practices, fume hoods, personal protective equipment and hazardous waste disposal. The Laboratory Safety Manual can be found at:

[www.uoguelph.ca/ehs](http://www.uoguelph.ca/ehs)

### **6.2 Laboratory Inspections**

Laboratory supervisors should continuously inspect the laboratories to identify and correct new issues and ensure compliance with lab-specific, departmental, University and regulatory requirements.

In addition laboratories will be inspected at least annually for the Joint Health and Safety committee and regularly by EHS.

## **7. Projects Involving Animals**

### **7.1 Animal Utilization Protocol**

The Animal Care Policy of the University requires that prior to using animals for research or instruction, the Principal Investigator complete an Animal Utilization Protocol and obtain approval from the Animal Care Committee. For projects extending over one year and for any changes to the original protocol, an Amendment/Extension Form must be submitted. Please allow a minimum of six weeks for approval.

For forms and more information regarding the use of animals for research and teaching, please refer to the Animal Care Committee website:

<http://www.uoguelph.ca/research/acs/acs/ACC/index.shtml>

Note that projects involving animals may also require biohazard approval.

The Principal Investigator is responsible for ensuring that in addition to animal-handling techniques, all persons working with animals are trained in chemical hazards such as anaesthetic gases and zoonotic hazards. The Principal Investigator must also ensure that workers have received appropriate information concerning medical surveillance programs and vaccinations. Further information regarding the medical surveillance program can be obtained from Occupational Health Services at x54284.

## 8. Projects Involving Human Subjects

University research projects and teaching programs involving human subjects are constrained in various ways by Canadian laws and human rights legislation. At the University, the responsibility for ensuring the rights and welfare of human subjects are maintained is delegated to the Research Ethics Board which evaluates all research in accordance with the policies and guidelines outlined on the Research Human Participants website:

<http://www.uoguelph.ca/research/humanParticipants/index.shtml>.

Principal Investigators must submit a completed protocol for approval by the University of Guelph's Research Ethics Board. Please allow a minimum of six weeks for approval. For more information on approval of protocols, contact the University Office of Research, x56606.

For projects involving human tissues or bodily fluids, a Biocontainment Certificate will also be required.

## 9. Field Work and Field Trips

Principal Investigators planning field work or a field trip as part of a course or program must be aware of the requirements the Safety Policies 851.06.04 Field Work and 851.06.23 Field Trips at:

- <http://www.uoguelph.ca/ehs/policies/06-04.pdf>
- <http://www.uoguelph.ca/ehs/policies/06-23.pdf>

Principal Investigators who wish to conduct scuba diving expeditions whether for research or teaching should be aware that this activity is strictly regulated in Ontario under the Occupational Health and Safety Act Regulation 629/94, Diving Operations.

See the Safety Policy 851.06.05 Occupational Diving at:

- <http://www.uoguelph.ca/ehs/policies/06-05.pdf>

## 10. Contracting Work

In some cases Principal Investigators may find that they require alterations to their laboratory space and/or the utilities provided to that space. There are numerous hazards associated with our University buildings across campus, including the presence of asbestos, PCB's and lead. Physical Resources personnel have the greatest knowledge about the hazards in a given building and how to proceed working with, around or removing these hazards safely and according to the applicable regulations.

They also have the greatest knowledge of the structural and mechanical systems of the buildings. For these reasons, all building modifications must be coordinated through Physical Resources.

Before Principal Investigators contract any other type of work they must ensure that EHS; Manager, Insurance; Legal Counsel; Physical Resources and/or the Deans' office are consulted as applicable.

## 11. Volunteers

Principal Investigators planning to invite volunteers into their laboratory must ensure that sufficient orientation and training is provided according to the hazards present in the laboratory. In addition Principal Investigators must ensure that volunteers complete and submit a "Release of Liability, Waiver of Claims, Assumption of Risks and Indemnity" form. Forms and additional requirements can be found in Safety Policy 851.01.09 Volunteers at:

<http://www.uoguelph.ca/ehs/policies/01-09.pdf>

## 12. Other Safety Information

### 12.1 EHS Chemical Inventory

The [EHS Chemical Inventory](#) is the University of Guelph's web-based system for maintaining an inventory of hazardous chemicals. The system was developed to facilitate tracking of hazardous chemicals at the institutional and laboratory level. The EHS Chemical Inventory can be found at the following website:

<https://cms.cs.uoguelph.ca/pls/hc/f?p=1001>.

The EHS Chemical Inventory permits the maintenance of detailed records for hazardous materials that are building, laboratory and supervisor-specific. The centralized design of the system permits access to the database by University administration and by emergency response teams.

In addition to being an inventory of hazardous materials, the EHS Chemical Inventory offers attractive and useful administrative features including support for campus-wide chemical exchanges. Laboratory supervisors are responsible for listing chemicals on the EHS Chemical Inventory and for maintaining records.

Access to EHS Chemical Inventory requires a User ID that is issued to Laboratory Supervisor by EHS. To obtain a user ID please call or email EHS at [ehs@uoguelph.ca](mailto:ehs@uoguelph.ca) and provide the following:

- Department name and number.

- Building number and laboratory room number(s).
- Principal Investigator's name.

## **12.2 Hazardous and Non-Hazardous Waste Disposal**

The University of Guelph has a well-established hazardous waste disposal system. Laboratory supervisors are responsible for knowing and understanding these procedures and for ensuring that all individuals working in the laboratory follow proper procedures for separating, collecting, and disposing of hazardous waste. Hazardous waste disposal request forms can be found at:

[http://www.uoguelph.ca/ehs/paper\\_forms/wastedis.pdf](http://www.uoguelph.ca/ehs/paper_forms/wastedis.pdf).

For information on hazardous waste disposal please refer to the Laboratory Safety Manual, the EHS website or contact EHS at x56401.

Non-hazardous waste disposal is managed through Physical Resources. The City of Guelph is a leader in waste recycling and diversion of waste from landfill. Please review the waste sorting guidelines, at the following website:

<http://www.pr.uoguelph.ca/sustain/detailsort.html>

## **12.3 Declaration under the Chemical Weapons Convention**

Under the Chemical Weapons Convention, the University is obligated to report importing, exporting, storage, transfer and consumption of certain chemicals. Anticipated activities for the coming year are to be reported every September and past activities of the previous year are to be reported every February. Declarations for the University are coordinated through EHS. Details of the Chemical Weapons declaration requirements including the chemicals of concern can be found at the following website:

[http://www.dfait-maeci.gc.ca/foreign\\_policy/cwc/declarationwhen-en.asp](http://www.dfait-maeci.gc.ca/foreign_policy/cwc/declarationwhen-en.asp)

For more information contact EHS at x56401.

## **12.5 Emergencies**

In case of emergencies contact Campus Police at x2000.

### **12.5.1 Hazardous Materials Spills**

Each laboratory location is to maintain chemical spill kits based on the type of hazardous materials contained in the particular laboratory. Such spill kits must be prominently labelled and readily

accessible. Laboratory personnel must be able to mitigate simple laboratory spills. Contact Campus Police at x2000 if spill cleaning could present risk to the worker's health or safety.

## 12.6 Reporting Incidents

There are specific incident reporting procedures at the University of Guelph, as required by the Occupational Health and Safety Act and the Workplace Safety and Insurance Act. Specifically, any critical injury, as defined under the OHSA, requires immediate Ministry of Labour notification. In the case of a critical injury contact Campus Police at x2000 and EHS at x53282. The Laboratory Supervisor must ensure that everyone working in his/her laboratory is familiar with the incident reporting procedures. (see Safety Policy Injury and Incident Reporting:

<http://www.uoguelph.ca/ehs/policies/04-02.pdf>.

## 12.7 Laboratory Decommissioning

The Laboratory Supervisor is responsible for the disposal of unwanted chemicals, and the safe decommissioning of the research laboratory. The laboratory supervisor must ensure that the laboratory is free of chemical materials, biohazards, and radioisotope contamination. The laboratory supervisor is responsible for any extraordinary cost of disposal of surplus materials and hazardous wastes. See the Laboratory Safety Manual for more information. Laboratory and equipment decommissioning forms can be found at:

<http://www.uoguelph.ca/ehs/forms/sorted-by-subject/>.

## 12.8 On-Line Safety Information

EHS website is located at: <http://www.uoguelph.ca/ehs>.

The following information can be found on the website:

- University safety policies, programs and procedures.
- MSDS's (Material Safety Data Sheets).
- Safety training course schedules and registration
- Newsletters.
- Forms.

## 12.9 Role of Occupational Health Services

The University maintains an active occupational health program. The Occupational Health Services Unit provides services and consultation in matters pertaining to:

- Occupational health medicine.

- First aid.
- Occupational exposures and health surveillance including rabies immunizations.
- WSIB return-to-work and modified work programs.
- Pre-placement assessments.
- Travel immunizations.
- Wellness.
- Employee assistance program.

Medical advice and information is obtained in confidence. Occupational Health Services will arrange counseling for employees through the Employee Assistance Program upon request.

## 13. Summary

*A LABORATORY SUPERVISOR'S SAFETY DUTIES* encompass but are not limited to:

- Providing lab specific safety training to laboratory personnel (training must be documented).
- Preparation of SOPs for hazardous materials and procedures used by laboratory personnel.
- Maintaining an up-to-date chemical inventory for his/her laboratory.
- Establishing procedures to handle emergencies.
- Investigating and reporting incidents.
- Identifying training needs and facilitating training as required.
- Reviewing health and safety hazards of new and modified practices.
- Coordinating compliance with applicable legislation, as well as University and departmental safety policies, programs and procedures.

### 13.1 Training

#### 1. Required training for the Laboratory Supervisor:

- Generic Safety Orientation and WHMIS
- Competent Supervisor and Due Diligence
- Laboratory Safety
- Biosafety (if research involves work with biohazardous materials)
- Radiation safety (if research involves work with radioactive materials)

#### 2. The Laboratory Supervisor must ensure that the following training is obtained by laboratory personnel:

- Generic Safety Orientation and WHMIS
- Laboratory-specific Safety Orientation that includes work-specific WHMIS - provided by the Laboratory Supervisor
- Laboratory Safety
- Biosafety (if research involves work with biohazardous materials) – provided by the Principal Investigator
- Radiation safety (if research involves work with radioactive materials)

### **13.2 Posting/Availability of Information**

The Laboratory Supervisor must have available/posted in the laboratory and communicated to all laboratory personnel:

- Occupational Health and Safety Act or reference to its location in the department.
- Safety training records.
- Applicable Standard Operating Procedures (SOPs).
- General laboratory safety rules.
- Incident reporting instructions.
- Emergency procedures including medical, fire, chemical spills.
- Inventory of all hazardous chemicals on the University EHS Chemical Inventory system.
- Permits (radioisotope, biohazard) as appropriate.

### **13.3 Other Items to be Provided by the Laboratory Supervisor**

- Personal protective equipment (PPE), (e.g. safety glasses, goggles, lab coat, gloves, etc.).
- Access to current Material Safety Data Sheets (MSDS) for all chemicals in the laboratory;
- Chemical spill kit.