

I. ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT

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The Ontario Ministry of Labour administers the Occupational Health and Safety Act. This Act was designed to encourage workers and employers to work together to ensure that the workplace is safe. The regulations were written primarily with the industrial setting in mind; in some cases interpretation of the regulations in the academic setting is less than straightforward. This aspect is especially true for the Chemistry Department in relation to the handling, storage and disposal of chemicals. Many laboratories in the department have stocks of small amounts of hundreds or even thousands of chemicals, unlike industrial plants that may keep large amounts of just a few chemicals. Unfortunately, the regulations do not differentiate formally between the storage of 50 mL, 4 L or 45 gallons of a flammable solvent, for instance.

WHO IS COVERED?

The Occupational Health and Safety Act governs health and safety in the workplace through the interaction of the Ministry of Labour, the employer and employees. With the exception of farm workers, inmates of correctional institutions and servants in private residences, the Act covers all workers who may come into contact with hazardous materials, a worker being defined as any person who receives remuneration for work. Teachers and academic staff of universities are now covered; graduate students are covered when they are acting as Teaching Assistants. Undergraduate students are not covered, however it is university policy that all students must obey the Occupational Health and Safety Act and its regulations. The Act assigns responsibilities to all parties--employer, supervisor and worker.

PHILOSOPHY

The philosophy of the Health and Safety Act is one of internal responsibility; that is, the employer, his appointed supervisors and his employees should take responsibility for properly applying the Act without the necessity of enforcement by the Ministry of Labour. Effective implementation of the act requires the successful interaction of management, supervisors and workers. Safety programs should be initiated and supported by the highest levels of management.

I-1. EMPLOYERS/WORKERS DUTIES

The employer is responsible for providing information, instruction and supervision to workers in order to protect their health and safety. The employer must ensure that his supervisors are "competent"* and that the supervisors and workers are acquainted with hazards in the workplace involving the handling, storage, disposal and transport of materials. The employer must take every reasonable precaution for the protection of workers. If there are 20 or more employees, the employer must establish a Joint Occupational health and Safety Committee composed equally of management and workers. The employer must cooperate with safety representatives or Joint Occupational Health and Safety Committees in the carrying out of their duties.

* A "competent person" means a person who,

- i. is qualified because of his knowledge, training or experience to organize the work and its performance,
- ii. is familiar with the provisions of this Act and the regulations that apply to the work, and
- iii. has knowledge of any potential or actual danger to the health and safety in the work place.

(OHSa Section 1-2).

SUPERVISORS DUTIES

The supervisor is responsible for ensuring that employees work in a safe manner and use any specified safety equipment. In some situations, the supervisor must supply written work instructions. The supervisor must advise workers of any danger to their health and safety and take every precaution reasonable in the circumstances for the protection of the worker.

WORKERS DUTIES

The worker is required to comply with the Act and its regulations, to properly use any specified protective equipment, to report any hazards or equipment defects and to avoid working in a manner which may endanger himself or another worker. The worker must comply with any prescribed medical tests. Workers have the right to elect health and safety representatives.

I-2. INSPECTIONS/ORDERS/PENALTIES

Although the philosophy of the Act is one of internal responsibility, an inspector of the Ministry of Labour may enter and inspect the workplace at any time. Inspectors from the Ministry of Labour make periodic inspections of the undergraduate teaching laboratories as well as the research laboratories of the Chemistry Department to evaluate whether there has been compliance with the regulations of the Occupational Health and Safety Act. If a problem is found, an inspector may issue an order stating the nature of the problem and may order that materials be taken out of use, work be stopped or that a workplace be isolated. Any such orders must be publicly posted at the workplace and employers and employees must comply with the order (although there is an appeal process). Penalties upon conviction of a failure to comply with the Act or an issued order may result in a maximum penalty of \$500,000 and/or 12 months in prison to the company and \$25,000 and/or 12 months in prison to an individual. In the past repeat orders were often issued for non-compliance but a directive from the Ministry of Labour has advocated a "get tough" policy such that charges are likely to be laid. The Department was found guilty of non-compliance on several orders during an inspection February 1991. Past inspections of laboratories in the Chemistry Department have drawn attention to a few recurrent infractions that are listed below.

1. Bottles of solvent improperly stored or left unattended on lab benches.
2. Waste improperly labelled and stored.
3. Gas cylinders not properly supported or affixed to lab benches.
4. Electrical wiring and water hoses on the lab floor that are not properly covered such that someone might trip on them.
5. Blocked access to electrical panels.
6. Fume hood sashes which are left open.
7. Vacuum pump belt guards not properly in place.

I-3. SAFETY COMMITTEE

The Occupational Health and Safety Act requires the establishment of a Joint Occupational Health and Safety Committee (JOHSC) to be comprised of members of the Faculty, staff and graduate students. The Departmental Health and Safety Committee is a part of the official Faculty of Science Joint Occupational Health and Safety Committee. Complaints or concerns about safety should be brought to the attention of members of this committee whose names are listed on the safety notices affixed to laboratory doors.

I-4. THE "RIGHT TO REFUSE"

Any worker has the right to refuse to do unhealthy or unsafe work. This right may be exercised when a worker has valid reason to believe that any procedure, chemical, machine, etc. with which he is to work is likely to endanger his health or that of any other worker. If this right is exercised, the employer must not discipline, intimidate or threaten the worker in any way. **If possible any such occurrences should be handled within the department without resorting to the Ministry of Labour.**

I-5. ACCIDENT REPORTS

In the event of serious accidents or occupational illnesses, the Ministry of Labour must be notified. For deaths or "critical injuries" (life threatening, unconsciousness, substantial loss of blood, fractured arms or legs, major amputations, major burns or blindness), the Ministry of Labour and health and safety representatives must be immediately notified as well as being given written notice within 48 hours. For lesser injuries requiring medical attention or occupational illnesses, written notice must be supplied to the Ministry and to health and safety representatives within four days. These are often called "**unusual occurrence reports**".

I-6 DESIGNATED SUBSTANCES

The materials listed below are called "designated substances" and are serious hazards in industrial situations. For each designated substance, detailed regulations governing allowed exposure limits, use of respirators, air monitoring, medical surveillance and maintenance of inventories have been made law. For each of these substances a guide book outlining these requirements has been prepared. If these "designated substances" are present in a workplace, a written assessment of their use, storage, transport and controls must be made by the employer in consultation with the Joint Occupational Health and Safety Committee. Based on this assessment, further control programs may have to be instituted to protect workers from exposure. Additions to this list will likely be made in the future:

acrylonitrile	ethylene oxide
arsenic	isocyanates
asbestos	lead
benzene	mercury
cadmium	silica
coke oven emissions	vinyl chloride