University of Toronto

OFFICE OF THE VICE-PRESIDENT, HUMAN RESOURCES AND EQUITY

TO: Business Board

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DATE: June 1, 2004 for June 17, 2004

AGENDA ITEM: 4

ITEM IDENTIFICATION:

Health and Safety Annual Report, 2003

JURISDICTIONAL INFORMATION:

Business Board is responsible for reviewing the annual report on environmental health and safety activities and for ensuring that the University is in compliance with the Occupational Health and Safety Act.

PREVIOUS ACTION TAKEN:

This is an annual report.

HIGHLIGHTS:

- The frequency rate of workplace accidents is somewhat better than the average for our peer employer group. We have continued to receive favourable experience ratings from WSIB, resulting in a premiums rebate for the fifth year. The frequency rate among service workers (CUPE 3261) is somewhat higher than average. We have instituted a pilot project to implement strategies to improve this.
- Asbestos remains a significant focus. In 2003 we introduced an Asbestos Control Policy and made significant revisions to the Asbestos Control Program. An Asbestos Advisory Committee with joint worker and management representation has been established. A position has been created within Facilities and Services to oversee ongoing asbestos abatement activities and any project work involving asbestos. Additional training programs have been developed and delivered to staff and supervisors who work with or near asbestos.

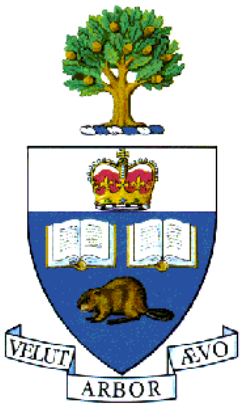
- Ten Ministry of Labour orders were received in 2003, all related to asbestos. All work has been completed.
- The laser safety program has been updated and several training sessions conducted; regular audits of equipment and practices will be conducted in 2004.
- Environmental Health and Safety has begun to utilize web-based training to increase our ability to reach staff with relevant, timely training. In 2004 we will be increasing our focus on communication and education of supervisors and employees.

FINANCIAL AND/OR PLANNING IMPLICATIONS:

None at this time.

RECOMMENDATION:

None. Report for information and review purposes only.



University of Toronto

ANNUAL REPORT ON

HEALTH AND SAFETY

2003

Office of Environmental Health and Safety
Health and Well-being Programs and Services
May 2004

31054

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1.0 INTRODUCTION

This report summarizes the major activities and the progress made in addressing health and safety issues at the University of Toronto during the calendar year 2003. This year's report was prepared jointly by the Office of Environmental Health and Safety and Health and Well-being Programs and Services.

The Terms of Reference of the Business Board require that the President or his designate prepare and submit to the Business Board an annual report on environmental health and safety activities undertaken to ensure compliance with the Occupational Health and Safety Act and the Environmental Protection Act. This report is submitted in compliance with these requirements.

2.0 ORGANIZATIONAL ARRANGEMENTS FOR HEALTH AND SAFETY

The senior management of the University and the Governing Council and its Boards have a duty under the Occupational Health and Safety Act of Ontario to "take every precaution reasonable in the circumstances for the protection of a worker". The employer must demonstrate that a proper system has been developed to prevent the occurrence of an offence, and that reasonable steps were taken to ensure the effective operation of the system.

Ultimate responsibility for safety within the University lies with the line of supervision. Supervisors and managers are legally responsible for health and safety in the workplaces under their control. Joint health and safety committees (mandated by law), and various staff groups including the Office of Environmental Health and Safety (EHS) and Health and Well-being Programs and Services provide assistance to the line of supervision in meeting these responsibilities.

Within the administrative structure of the University there are a number of regulatory/advisory committees. These are the University of Toronto Radiation Protection Authority, the Biosafety Committee and the Laser Safety Committee. These Committees oversee and regulate specific hazards related to ionizing radiation, infectious/ biohazardous agents and lasers. The chairs of these committees sit on the Senior Management Committee on Health and Safety. This committee is chaired by and provides advice to the Vice-President Human Resources and Equity. Its major function is to make recommendations with respect to regulations and other actions related to the Occupational Health and Safety Act, the Environmental Protection Act, other pertinent legislation and policies on health and safety approved by the Governing Council. The membership of these committees is included as Appendix 4 to this report.

The Office of Environmental Health and Safety reports to the Assistant Vice-President, Human Resources and has as its purpose to *"enhance research, teaching and learning at the University by fostering a healthy and safety work and study environment and by promoting employee health and well-being"*. The Office provides technical advice and assistance to the University community on health and safety matters, participates in the development and implementation of health and safety policies, procedures and programs, and monitors and audits compliance with health and safety legislation and University policies.

In February of 2003, the Vice-President, Human Resources created a new unit, Health and Well-being Programs and Services. This unit amalgamated three formerly

autonomous units: Disability Claims and Accommodation Services (DCAS), Occupational Health Services, and WSIB office. Although too early to be reflected in this year's statistics, it is anticipated that an integrated office will have a positive impact on the rate and severity of workplace injuries and illnesses and create greater opportunity for education and prevention initiatives.

As a result of the integration, the task of tracking and reporting work-related injuries and illnesses is now being carried out within Health and Well-being Programs and Services and is no longer a function of Environmental Health and Safety. However staff from the two offices work closely together to monitor and respond to workplace injuries and illnesses. Each office reviews incident reports and where appropriate office staff collaborate to ensure that both individuals and the environment are considered when responding to incidents. Health and Well-being Programs and Services also reports to the Assistant Vice-President, Human Resources. The staff of both units is listed in Appendix 1.

2.1 Joint Health and Safety Committees

Under the Occupational Health and Safety Act of Ontario, the University is required to establish and maintain joint (worker and management) health and safety committees in the workplace. The committee is an advisory group of worker and management representatives, and is considered to be the backbone of the internal responsibility system (a cooperative effort regarding workplace health and safety which encourages participation and self-regulation by employers, supervisors and workers). The major functions of these committees are to inspect the workplace on a regular basis, and make recommendations to management respecting workplace health and safety.

The University currently has 44 joint health and safety committees established based on criteria such as employee group or union, faculty, department or building. Appendix 2 lists the committees and summarizes their status of compliance with respect to two specific provisions under the Occupational Health and Safety Act of Ontario. Each committee is required by law to have at least two certified members and to meet at least once every three months (4 times a year).

Most of these committees are actively and effectively dealing with local health and safety issues. However, in 2003 approximately 20% of the committees had less than the required number of meetings. While this represents an improvement over the previous year's experience the Office of Environmental Health and Safety will strengthen its efforts in 2004 to ensure that these committees meet regularly and fulfill their mandate. As shown in Appendix 2, several of the committees do not currently have the required number of certified members. This is an ongoing challenge due to staff transfers, departures and retirements, and conflicting time commitments. The Office of Environmental Health and Safety will work with committees to ensure that all committees have at least 2 certified members.

3.0 WORK-RELATED INJURIES AND ILLNESS

In 2003, as in the past, data to compile the annual statistics has been manually collected. In 2004/05 we will implement a software package specifically designed for the collection and analysis of WSIB information, improving our ability to collect and interpret data and track trends from year to year and between departments. This will assist the university in our efforts to develop effective and targeted strategies to address workplace injury and illness at University of Toronto.

3.1 Types of Incidents and Days Lost

Table 3.1 below indicates the number, types of accidents and the number of days lost for the period 1999 to 2003.

Table 3.1
Work Related Injuries & Illness

	1999	2000	2001	2002	2003
# of Critical Injuries	6	3	0	4	4
# of Health Care Accidents	72	82	86	95	79
# of Lost Time Accidents	70	83	72	50	59
# of Days Lost	777	1017	1570	744	901
Average Days Lost Per Accident	11.1	12.3	21.8	14.8	15.23

Critical Injuries

Critical injury has a specific definition under the Occupational Health and Safety Act. A critical injury is one that is of a serious nature that:

- places life in jeopardy;
- produced unconsciousness;
- results in substantial loss of blood;
- involves the fracture of a leg or arm but not a finger or toe;
- involves the amputation of a leg, arm, hand or foot, but not a finger or toe;
- consists of burns to a major portion of the body; or
- causes the loss of sight in an eye

There were four (4) critical injuries in 2003; a broken ankle, wrist and rib and a fourth injury that was denied by WSIB. The three approved claims were as a result of falls.

Health Care Accidents

A Health care accident is one which requires professional medical attention but involves no time lost from work past the day of the accident. There were 79 allowed health care accidents in 2003, which was a decrease from 95 claims in 2002. There are two claims that are pending from 2003.

Lost Time Accidents and Accident Severity

Table 3.1 above shows the historical data on the number of lost time accidents compensated by the Workplace Safety and Insurance Board (WSIB) and the number of days lost from 1999 to 2003.

There were 59 (allowed) lost time accidents in 2003. There is one claim pending.

There were 901 days lost due to accidents in 2003. This is a slight increase from 2002 (744 days lost) but remains significantly less than the experience in 2001 (1570 days lost). The average number of days lost per accident in 2003 was 15.2 (an increase of .4 from 2002). It is worth noting the length of lost time as a result of each injury because this is

considered a reflection of the severity of the injury (the greater the number of lost days per accident, the greater the severity and/or impact). Of the 59 lost time accidents, over half of all injured/ill employees (58%) returned to work within 5 days and 69.5% returned within 10 days of the incident. Within three weeks of the date of incident 78% of the employees had returned to the workplace. Although any time lost as a result of an accident is undesirable, most employees returned to work within 5 working days.

3.2 Claims Breakdown by Employee Group for the Period 2001 to 2003.

Table 3.2
Claims Breakdown by Employee Group for ther Period 2001 to 2003

# of Lost Time Accidents by Employee Group			Group	Frequency* by Employee Group		
2003	2002	2001		2001	2002	2003
34	23	24	**CUPE 3261**	4.5%	2.5%	4.10%
6	9	12	**Trades**	21.1%	15.8%	9.52%
0	0	2	**CAW (Operating Engineers)**	3.5%	0.0%	0.00%
2	1	1	**CUPE 1230**	1%	1%	0.44%
1			**CUPE L2484**			3.45%
2			**Police**			4.26%
1			**HERE 75 (89 Chestnut)**			1.02%
6	9	23	**USWA**	1.0%	1%	0.12%
3	7	8	**Admin (non-union)**	1.5%	1.5%	0.39%
4	1	2	**Academic/Librarian**	1%	1%	0.12%

*Frequency is the number of lost-time accidents per 100 staff members in the identified group.

Table 3.2 above shows the breakdown of lost time claims by employee group. The majority of lost time claims (58%) arise among the CUPE 3261 group. CUPE 3261 is comprised of caretaking and grounds staff at the St. George, Mississauga, Scarborough campuses, and animal care workers in Medicine and Zoology.

Table 3.2 also shows the frequency rate per identified group. The frequency rate is determined by calculating the number of lost-time accidents per 100 staff members in the identified group and then expressed as a percentage.

Data against which we can benchmark are the following:

Ontario WSIB Rate Group 923 (Janitorial Services)	2.51%
Ontario WSIB Rate Group 929 (Supply of Non-Clerical Labour)	6.24%
Ontario WSIB Rate Group 817 (Education Facilities)	.52%

The overall frequency rate reported by WSIB for the University of Toronto is .45%. This is good and somewhat better than the average compared to our peer institutions in Ontario (.52). It is also an improvement from last year (.5%).

The frequency among the CUPE 3261 employee group has fluctuated from 4.5% in 2001, 2.5% in 2002 back up to 4.1% in 2003. It still remains higher than the Ontario WSIB rate of 2.51%. A pilot project is underway to implement strategies to reduce the incidence of injury and illness within this employee group.

In the 2002 Health and Safety Report, the Trades group had what was considered a high

rate of injury (15.8% in 2002, 21% in 2001). This year the Trades group rate has fallen to 9.52%. Efforts will continue to reduce the rate even further.

3.3 Claims Breakdown by Type of Accident for the Period 2002 to 2003

Table 3.3
Claims Breakdown by Type of Accident for the Period 2001-2003

Lost-Time Accidents by Cause	# of Lost-Time Accidents	Accident Type	# of Lost Days	Days Lost by Cause
29%	17	Falls	324	36%
34%	20	Strains/Sprains	363	40%
24%	14	Contact	106	12%
8%	5	Exposure	77	9%
5%	3	Other	31	3%

Classification of lost time claims by type of accident giving rise to the claim shows that there are three major types of accidents (Table 3.3 above): These are:

- Strains and sprains arising from lifting or overexertion (34%)
- Falls (29%)
- Contact with moving or stationary objects (24%)

These three types of injuries account for 87% of all claims.

Table 3.3 above also shows the breakdown of lost days by accident type. The major contributors to lost days are strains and sprains with 20 claims and 40% of the lost days. Falls contribute to 36% of the lost days and 17 claims. The third largest contributor was contact with moving or stationary objects, which represent 12% of all lost days and 14 claims. In 2004 Environmental Health & Safety and Health & Well-Being Programs and Services will work co-operatively with the caretaking department where there is a concentration of strains, sprains and falls, in an attempt to reduce the frequency of injuries.

3.4 Accident Costs

The University pays WSIB a premium each year based on the number of employees at the university. At the end of each year, the University pays a surcharge or receives a rebate depending on the number and severity of the injury claims in comparison to other similar organizations(experience rating).

The University continued our track record of a good experience rating and received a rebate for the fifth consecutive year.

4.0 OCCUPATIONAL HEALTH ACTIVITIES

The Occupational Health Service was amalgamated into Health and Well-being Programs and Services in February 2003. The tasks of the Occupational Health Nurse and the consulting Physician continue to include:

- Occupational disease prevention;
- Health promotion (individual an/or group); and,
- Advice and consulting on occupational health matters.

4.1 Occupational Disease Prevention Programs

Occupational disease prevention relates to the actual or potential impact of biological, chemical, and physical hazards on workers. Based on legislation or specific identified risk factors certain worker groups are provided with baseline health evaluations, ongoing medical surveillance and provision of prevention strategies and appropriate vaccines as indicated.

The major medical surveillance programs in effect in 2003 were:

1. Tuberculosis
   Annual screening completed for workers in dental clinics, student health services, animal care workers, campus police services and some research laboratory personnel.

2. Zoonotic Diseases
   Animal care workers undergo surveillance for exposure to Q Fever (exposure to sheep) psittacosis (exposure to birds) and Simian B Herpes (exposure to non-human primates). Immunization for Rabies, Hepatitis A and Hepatitis B are provided as required.

3. Laser Workers
   Baseline histories and eye examinations are performed on workers using Class 3B and 4 Lasers.

4. Workers in Noise Hazard Areas
   Audiograms are performed on employees who are risk of noise induced hearing loss due to the environment in which they work.

5. Influenza immunization
   Influenza immunization clinics are held each year at all three campuses. UTM campus organized a clinic in conjunction with the Peel Public Health department.

In addition to the above medical surveillance initiatives, the Health and Well-being Programs and Services staff developed a protocol for medical surveillance of workers potentially exposed to asbestos. The program will be implemented in 2004.

4.2 Health Promotion

The Occupational Health staff promote healthy living by identifying hazards (e.g. sun related hazards) and strategies to protect ourselves from those hazards (e.g. distributed information and sunscreen to all grounds workers and campus police). In addition staff provide information sessions and develop programs to maintain and enhance the health of employees in the University of Toronto.

4.3 Advice and Consulting on Occupational Health Matters

In addition to initiatives organized by the occupational health staff, the staff provide a clinical service to any employee requiring occupational/medical assistance or advice. Employees access this service by making confidential appointments with the nurse or the physician.

Other Health and Well-being Programs and Services staff responsible for long term disability, sick leave and WSIB consult with medical team members to assist in planning or strategizing in complex cases or in facilitating referrals on behalf of employees to external medical providers.

Summary of Occupational Disease Prevention Activities by Number of Participants

Influenza Vaccinations	896
Immunizations (TB, Hep B etc)	198
Serology – Blood Tests	166
Audiograms	142
Other Procedures and Assessments	106
Health Risk Assessments	53
Vision Tests	25

Health Promotion Activities by Number of Participants

Back Program	10
Healthy Heart	25
Sun Health	52
Sneaker Day/Walking Program Event	104

5.0 HAZARDOUS WASTE MANAGEMENT

Hazardous Waste Management is responsible for the hazardous waste disposal program for chemical and radioactive wastes, responding to major chemical spills, and providing training, information and advice relating to disposal and environmental protection legislation for hazardous materials.

5.1 Chemical Waste Management

A few years ago, the University's central chemical waste transfer facility was demolished to accommodate the construction of the Bahen Centre for Information Technology building. From that time to the present, interim arrangements were made with an external contractor to remove chemical wastes from thirty-five sites on the St. George Campus. This arrangement resulted in a dramatic increase in the cost of the disposal of chemical wastes. These disposal costs will continue to increase due to :

- expected industry increases in disposal costs of a minimum of 10%

- the commissioning of two large new research buildings (CCBR and the Leslie Dan Pharmacy Building) which will generate a significant amount of chemical waste

- the double cohort and its on-going effect that will have a significant impact to increase waste production

In 2004 construction of a centralized waste handling facility in the Lash Miller Building will be completed. While this will result in some cost savings (Lash Miller produces approximately 40% of the solvent/flammable wastes on the St George Campus) we will continue our efforts to further centralize waste facilities to produce more cost-effective packaging through consolidation of waste chemicals, thereby significantly reducing costs.

5.2 PCB Waste Management

An inventory of 112 drums of PCB-contaminated materials is stored in the University's central PCB waste storage site at the Institute for Aerospace Studies. As mandated by the Ontario Ministry of the Environment, the disposal of the entire inventory of PCB-contaminated materials will be completed by the 2005 deadline. This includes the 7 drums of PCB waste stored at the Scarborough Campus.

5.3 Radioactive Waste Management

In 2002 the AECL increased its waste disposal rates for low-level radioactive wastes by almost 900%. Environmental Health & Safety was able to mitigate the impact of this by introducing a program to more efficiently package solid waste and a "Delay and Decay" program to eliminate short-lived isotopes from the waste stream and this has resulted in significantly decreasing radioactive waste disposal costs. Although the amount of radioactive waste produced by research has not changed over the past five years, we do expect an increase over the next several years due to the double cohort and commissioning of two major research buildings (CCBR and Leslie Dan Pharmacy).

In 2004, the Office of Environmental Health and Safety will continue its effort to more effectively package some radioactive wastes for disposal; consideration is being given to upgrading or replacing the aging compactor used for compressing some of these wastes. A new compactor, would be more reliable and would reduce the number of compacted waste containers shipped to the AECL. A 20% (approximately 12 drums per year) reduction in the total number of containers produced would result in savings of $31,000 per year based on current rates.

5.4 Other Notable Environmental/Waste Issues

MSB Underground Storage Tank: Diesel Fuel Leak

In February 2003, an underground storage tank in the vicinity of the Medical Sciences Building filled with diesel fuel developed a leak. More than 350 gallons of fuel was lost to the surrounding underground area resulting in the detection of diesel fuel vapours in the sanitary sewer system connecting the Medical Sciences Building with the downtown hospitals.

After consultation between city and provincial officials, an external consultant, Facilities and Services and Environmental Health and Safety representatives, the emptied fuel storage tank was cemented in place and clean-up procedures were conducted at locations affected by the diesel fuel vapour accumulation. The clean up was handled promptly in a manner that satisfied all regulatory requirements.

Gas concentrations of ignitable/combustible vapours/gases in the affected areas will be monitored for up to one year. The monitoring reports to date indicate dissipation of the contaminant plume. A number of aging underground fuel storage tanks on the St. George campus are under review by Facilities and Services: some of these may require upgrading or removal in order to comply with new regulation.

6.0 OCCUPATIONAL HYGIENE AND SAFETY

The major functions of this unit are to provide advice on health & safety issues, to evaluate potentially hazardous situations involving chemical, physical and ergonomic stressors, to develop and assist in the implementation of programs to protect the health and safety of employees and students, and to evaluate the effectiveness of these programs.

Presently, there are three Occupational Hygienists in Occupational Hygiene and Safety. A fourth hygienist will be added in 2004 to meet increasing demands in this area.

6.1 Ministry of Labour Visits/Orders

A number of orders were issued in 2002 pertaining to asbestos. While most were complied with, extensions were granted on four which required further action in 2003.

1. In 2002 we completed and submitted asbestos inventories on 11 designated buildings on campus. We were required to update records on all remaining buildings (69) by 7th February, 2003. This work was completed.
2. We were also required to inspect these remaining buildings to determine the condition of asbestos-containing materials by 7th February, 2003. This work was completed.
3. Clean-up and remove the fallen, asbestos-containing material in the "steam" tunnel system (85% of this was done according to plan in 2003 but an extension was obtained for the remaining 15% which is expected to be completed in September 2004).
4. Repair, seal, remove or permanently enclose any asbestos-containing material in the "steam" tunnel system, that will continue to fall because of deterioration (85% of this was done according to plan in 2003 but an extension was obtained for the remaining 15% which is expected to be completed in September 2004).

In 2003, there were a number of visits by the Ministry of Labour (MOL), almost all were related to asbestos issues. Ten orders were written as a result of these visits and all involved asbestos issues:

1. Determine if damaged elbows in the main boiler room at UTSC contain asbestos (by 21st July 2003). Completed by due date.
2. Friable material was discovered unexpectedly during work in the main boiler room at UTSC and was not reported to the MoL. The University was ordered to report this to the MoL (by 21st July 2003). Completed by due date.
3. Employer required to provide air samples of main boiler room at UTSC to determine airborne asbestos levels (by 21st July 2003). Completed by due date.
4. Clean-up and remove the fallen, asbestos-containing material and repair, seal, remove or permanently enclose any asbestos-containing material at the Central Steam Plant that will continue to fall because of deterioration by 31st October 2003. Extension obtained and work completed.
5. Clean-up and remove the fallen, asbestos-containing material and repair, seal, remove or permanently enclose any asbestos-containing material in any building on the St George Campus that will continue to fall because of deterioration. No "comply by" date given but work is on-going and will take some time.
6. Prepare and submit to the MoL, a compliance plan with respect to #5 above by 20th October 2003. Completed by due date.
7. Clean-up and remove the fallen, asbestos-containing material and repair, seal, remove or permanently enclose any asbestos-containing material in Rooms

3334D, 3340 and 3348 of the Medical Sciences Building that will continue to fall because of deterioration. No “comply by” date given but work was completed within one week of written order.

8. Use of personal protective equipment by all workers having to access the rooms in #7 above. Immediate compliance required. Completed as required.
9. Clean-up and remove the fallen, asbestos-containing material and repair, seal, remove or permanently enclose any asbestos-containing material in Room 55 of the McLennan Physical Laboratory that will continue to fall because of deterioration. No “comply by” date given but work was completed within one week of written order.
10. Use of personal protective equipment by all workers having to access the room in #9 above. Immediate compliance required. Completed as required.

6.2 Biosafety

The functions of the University of Toronto Biosafety Committee and the Biosafety Unit are to promote appropriate standards of biological safety in laboratories and to enable compliance with these standards.

Biosafety Committee

During 2003, the University of Toronto Biosafety Committee (membership listed in Appendix 4) received 94 applications from Principal Investigators for new Biosafety Certificates. These were reviewed and subjected to a risk assessment by the Committee and the Biosafety unit. Based on known and perceived risks posed by the biological agents and the intended manipulations,

27 were approved for projects requiring Containment Level 1,
63 were approved for projects requiring Containment Level 2, and
4 were approved for projects requiring Containment Level 3 laboratory conditions.

(NOTE: Currently, only 1 location at U of T provides Containment Level 3 laboratory conditions. No activities requiring a higher level of containment were approved; U of T has no Containment Level 4 laboratories.)

Biomedical/Pathological Waste Disposal

The Biosafety Office has continued to work with Facilities & Services to implement a new procedure for the disposal of 'biomedical / pathological' laboratory waste, needles & blades and glass waste. The University of Toronto selected a specially licensed contractor for the removal of this laboratory waste. The waste is transported to a nearby facility where it is steam sterilized in an autoclave with a valid Certificate of Approval from the Ontario Ministry of Environment. Following mechanical shredding, the inactivated waste is transported to a landfill in southwestern Ontario. This new procedure is the result of new regulations under the Environmental Protection Act of the Ontario Ministry of the Environment and there are significant cost implications; as a result, waste disposal costs have increased dramatically, from about $.075/Kg, to approximately $.55/Kg. Waste volumes are projected to increase with the completion of the CCBR and Pharmacy buildings, and the continuing impact of the double cohort influx.

In 2004, EHS will continue to consider all options within the regulatory framework for cost-effective disposal of biomedical/pathological wastes.

New Level 3 Containment Facility

A new, shared, multi-user facility was constructed on the 4th floor of the Medical Sciences

Building to replace the containment laboratory previously provided at that same location. Construction of this new Containment Level 3 laboratory and major equipment installation and connection was near completion at the end of 2003. It is anticipated that this laboratory will be certified and put into use by mid-2004. The majority of the laboratory projects to be accommodated within this new facility will involve 'in vitro' work with Human Immunodeficiency Virus, *Mycobacterium tuberculosis*, and other human pathogens.

6.3 Hazard Control

Asbestos Issues

The joint union-management Asbestos Task Force completed its work in mid-2003. The major accomplishments of this task force include the following:

1) The establishment of an Asbestos Control Policy (approved by Governing Council in June 2003)
2) The revision of the University of Toronto “Asbestos Control Program”.
3) The creation of a new position in Capital Projects (Asbestos Coordinator) to ensure proper implementation and enforcement of the Asbestos Control Program for all activities or projects conducted or contracted by Capital Projects which have the potential to disturb friable asbestos-containing materials.
4) The creation of a new position in Facilities and Services (Manager, Environmental Hazards and Safety) to ensure proper implementation of the Asbestos Control Program across the University.

In 2003, a number of ministerial orders were issued to the University of Toronto with respect to the asbestos concerns; section 5.1 provides the status of these orders. A number of additional steps have been taken to implement the asbestos control program, including:

- Ongoing training and retraining of staff in Facilities and Services and Capital Projects who work with or in close proximity to asbestos-containing material and those who supervise or contract others to do work that may involve asbestos activities.

- Meetings with project managers in Capital Projects to reinforce the need to ensure that contractors are complying with the University’s Asbestos Control Program; contractors are now required to sign an acknowledgement that they will comply with the University’s Asbestos Control Program.

- Testing and/or cleaning of mechanical rooms (it is expected that this will be about 30% completed by year end 2004); testing and cleaning the steam tunnel system (about 85% completed).

- An asbestos abatement crew has been engaged by Facilities Services to complete projects across the University on a priority basis (it is expected that these projects will continue to year end 2004).

- An Asbestos Advisory Committee, with worker and management membership, has been established to monitor the implementation of the Asbestos Control Program and to advise on asbestos-related issues.

In 2004, we will continue to address the many issues related to asbestos at the University of Toronto.

West Nile Virus Prevention Measures

In the spring of 2003, the University of Toronto implemented a prevention strategy to eliminate possible mosquito breeding sites and limit transmission of the West Nile virus on campus.

The University's Grounds Services staff worked diligently to eliminate standing water on campus, such as in ground depressions, puddles, flowerpots or other containers. Ashtrays and recycling bins were fitted with drainage holes and garbage cans were emptied daily. Window well drains were also cleaned out to prevent water accumulation. The Grounds Staff received training and information on how to protect themselves from mosquitoes, including the use of light-coloured clothing, long-sleeve shirts and insect repellant.

Storm water catch basins, including those on public streets at the St. George campus that were identified as potential breeding sites for mosquitoes were treated with larvicide pellets by the City of Toronto Public Health Department. In addition, the university contracted out the treatment of all other catch basins and potential breeding sites; all larvicide applications had to be done by trained and licensed contractors under permits issued by the city.

In 2004, EHS will be promoting a similar prevention strategy.

6.4 General Health and Safety Concerns

Common health and safety issues raised in the past year by the University community involve those associated with office ergonomics, indoor air quality and water quality.

Office Ergonomics: In 2003, there were 29 ergonomic assessments of chairs, computer workstations and environmental factors such as lighting and glare; many of these assessments were the result of requests from individuals experiencing pain or discomfort. Additionally, EHS delivered seven seminars on "Office Ergonomics" that dealt with issues such as workstation design, posture, lighting and job design.

Indoor Air Quality: EHS investigated a number of indoor air quality concerns, ranging from comfort parameters of temperature, humidity and air movement to contaminant build-up in occupied spaces. Examples of indoor air quality occurrences/concerns include:-

- Rotman School of Management – Room 307 (ventilation), Room 348 (ventilation), 4th Floor (odour, contaminant build-up)
- Faculty of Dentistry – Room 318 (dust)
- Munk Centre – Basement (odours, temperature)
- 65 St. George Street – Rooms 202, 202A & 210 (dust, temperature)
- Simcoe Hall – Room 10A (temperature, ventilation)
- Koffler Student Services Centre – U of T Press (odours from overheated elevator hydraulic fluid)
- FitzGerald Bldg – Rooms 147B & C (odours)

All of these concerns have been addressed appropriately by EHS

Drinking Water Quality: EHS investigated a number of water quality concerns generally occurring in older University buildings, ranging from turbidity and elevated levels of iron/lead to water temperature and biological contamination. Examples of water quality occurrences/concerns include:

- Admissions & Awards (Metals – Aluminum)
- Banting Institute (Temperature, colour and water flow)
- FitzGerald Building (Colour, taste)

All of these concerns have been addressed appropriately by EHS

6.5 Other Notable Health and Safety Issues:

- Concerns expressed by the staff and the Zoology joint health and safety committee about the ventilation within the workshops in the Department of Zoology were investigated, in conjunction with Facilities and Services. The ventilation systems were found to be poorly designed and inadequate for the activities conducted in the shop. Recommendations were made for the redesign of the ventilation systems and possible equipment upgrades for both the general and local exhaust systems. Presently, these recommendations are being considered by the Department of Zoology.

- Concerns expressed by Trade Services drivers regarding elevated levels of carbon monoxide (CO) in vehicles were investigated. The assessment revealed the CO levels in the trucks to be below the allowable exposure limit in Ontario, although slightly elevated in two of the trucks. Recommendations made included regular scheduled maintenance of the trucks and instructions for the drivers not to leave the trucks idling.

- Concerns expressed by Trade Services electricians regarding the possible exposure to diesel exhaust, lead and mercury during the maintenance and testing of emergency diesel generators and their batteries were investigated. The assessment revealed that the diesel exhaust exposure of workers during generator maintenance and testing was well below the recommended allowable exposure limit and the levels of lead and mercury were well below their respective occupational exposure limits. Recommendations made included limiting the amount of time the worker spends in the vicinity of the generator, proper use of personal protective equipment and regular scheduled maintenance of the generators.

- Possible exposure to mercury by Trade Services personnel was investigated following concerns by two electricians about elevated mercury blood levels. The investigation involved taking work histories of selected shop personnel and measurements of mercury levels in the Trades Shop as well as in five other locations of concern. The results of the investigation did not detect airborne mercury in any of the locations monitored. In 2004, EHS and the Occupational Health Service will investigate this further, including additional workplace monitoring and biological monitoring (blood/urine) of a number of trades personnel.

- Air quality concerns expressed by occupants of the McLennan Physical Laboratories were investigated. Sampling for asbestos and analysis by transmission electron microscopy at ten locations throughout the building showed no asbestos fibres present. Sampling and analysis for volatile organic compounds and metals showed results that were well within allowable exposure limits/guidelines.

- Air quality concerns were investigated following a report of respiratory symptoms in an employee at University of Toronto Faculty Association (UTFA). The UTFA office had a history of water leaks from windows and from the pool on the floor above. The investigation showed no obvious signs of mould contamination and revealed indoor air quality parameters to be within the recommended range. An air sampling assessment showed levels of airborne fungal particulates to be non-indicative of

indoor mould growth. The recommendations made involved regular housekeeping and repairs of leaky windows and the pool to minimize conditions for mould growth.

- Concerns regarding possible employee exposure to elevated levels of metals in drinking water at 63 & 65 St. George Street were investigated. Water sampling revealed an elevated level of lead in the drinking water at 65 St. George. Recommendations were made for F&S to locate the source of lead in the building and if possible replace the affected piping. Investigation by F&S revealed that the lead containing piping was likely the piping leading from the water main to 65 St. George Street and that it is not feasible to remove it. Recommendation was made to have water filters installed at 65 St. George; this was done.

7.0 RADIATION PROTECTION SERVICE (RPS)

The major function of this unit is to ensure the safe use of all substances and devices which emit ionizing and non-ionizing radiation. This includes radioisotopes utilized in research facilities, irradiators, radiography by outside contractors, x-ray generating equipment, as well as the sources of non-ionizing radiation such as electromagnetic, electric, and magnetic standing fields, radiofrequency and microwaves, and lasers.

7.1 Radiation Protection Authority

Ultimate responsibility for the control of radioactive materials within the University lies with the Radiation Protection Authority, the membership of which is listed in Appendix 4.

The Authority met three times during 2003, on February 26th, June 9th and October 24th. Major issues discussed include the following:

- follow-up to decommissioning of the Slowpoke reactor.
- training and refresher courses
- quality assurance program for bioassays
- inspections by the Canadian Nuclear Safety Commission

7.2 Ionizing Radiation

In addition to the procurement, usage, storage, and disposal of radioactive materials, the RPS is responsible for 86 Radiation Devices, 80 X-ray machines, the calibration of approximately 150 contamination meters annually, research activities in over 1000 locations, in 33 buildings, on all 3 major campuses, as well as the off-campus use of radioactive materials in locations under the control and authority of the University. The RPS is also responsible for sealed radioactive materials in devices.
Numbers of staff completing the full Radiation Protection Course increased by over 12% in 2003, an increase of 67% compared to three years ago, plus additional summer and special project students, certified workers, and others. Presently, the RPS is organizing refresher training for all permit holders and users of nuclear substances and radiation devices. The need for such refresher training was noted in the Canadian Nuclear Safety Commission evaluation and during recent inspections by their Mississauga inspectorate. The first refresher training course is scheduled for April 2, 2004 at the University of Toronto at Mississauga, a second is being scheduled for the University of Toronto Scarborough Campus. These will be followed during 2004 with numerous sessions on the St. George Campus. There will also be awareness training for all those with the potential for incidental exposure to these materials e.g. housekeeping, trades and facilities, campus police services. The RPS has also prepared web-based Radiation Protection training modules and refresher training.

A new electronic procurement service will be implemented in 2004 to facilitate the purchasing of radioactive materials, with fewer errors in data entry and requisite follow-up.

The RPS participates in the Quality Assurance program offered by Health Canada for Radioiodine-125, Tritium, and Carbon-14 bioassays. The Radiation Protection Service was successful in obtaining certification for competence in each of these assays in 2003, as in previous years.

The Radiation Protection Service has experienced significant staff turnover in 2003 with both Radiation Safety Officers leaving UofT at the end of the year. Both positions are expected to be filled within the first quarter of 2004.

Notable Issues

- The University of Toronto was inspected several times during 2003 by the Canadian Nuclear Safety Commission. While issues of non-compliance were discovered, all were successfully addressed by corrective actions; non-compliance issues commonly include contamination monitoring, permit postings, inventory documentation, warning signage and eating and drinking in areas of radioactive usage/storage.

- The “orphaned” radioactive materials stored on our campus, notably the plutonium sources, have been removed and transported away from the University of Toronto.

- There were numerous successful radiography procedures completed during 2003. However, there was one incident where a few individuals remained in the building when the radiographers were placing their warning signs and access control tapes. As a result, and according to the procedures developed by the RPS, the work was stopped – the radiation source was never removed from its shielding/containment. Follow-up of this incident included a review of the program requirements and communication of the procedures with Capital Projects. The work in question was safely completed during the following week.

7.3 Non-Ionizing Radiation

The Radiation Protection Service is also responsible for all aspects of non-ionizing radiation at the University. There are growing concerns with electromagnetic fields, static electrical and magnetic fields as well as, more recently, radiofrequency (wireless communication) fields in the workplace. A new advisory committee, distinct from the UTRPA, will be formed to address and provide expertise in these areas.

The Laser Safety Program has been updated to reflect changes associated with the relatively new ANSI Standard (American National Standard for the Safe Use of Lasers in Educational Institutions --- Z136.5 – 2000).
There were four (4) training sessions in 2003 resulting in the training of 60 laser supervisors and workers. In early 2004 the RPS will follow-up with the graduates of the most recent training session in their workplaces and will soon begin regular workplace inspections. The RPS has prepared a memorandum to laser researchers, as well as to Chairs and Health and Safety Committees of relevant research departments requesting updated inventory information on existing and planned laser facilities for future registration, training of users, and audits. Operational monitoring and verification of the functioning of these services will incorporate elements of training, risk assessments, inspections and follow-up, event investigations and exposure report results. These elements will be quantified over time to analyze trends; the results of these trends will then used as guidance in further program development, as well as audit and training improvements.

Laser Safety Committee

The Laser Safety Committee met only once last year but since the appointment of a Laser Safety Officer in the Radiation Protection Service in late 2003 and a commitment to inspections of all Class 3b and Class 4 lasers and laser systems as well as additional training, we expect a much more active year in 2004.

8.0 TRAINING AND EDUCATION

The training courses provided by the Office of Environmental Health and Safety and the numbers trained are summarized in Appendix 3. The number of courses and individuals trained increased by over 50% in 2003. In the past two years, EHS has been more involved in the development and delivery of courses/programs for staff and students to meet regulatory requirements. To satisfy increasing workload demands of health and safety program development, training and workplace assessments, EHS will hire another Occupational Hygienist in 2004.

In 2004 EHS will be increasing its focus on communication and education. We will be developing programs/brochures/booklets and web-based training tools to better communicate duties and responsibilities with respect to health and safety to managers/supervisors and others in the University community.

Appendix 1

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY (August 2003)	
Director, Office of Environmental Health and Safety	J.N.C.McNeill BSc., MEng., CIH, ROH
Administrative Assistants	Shamin Ramjit
	Harjit Bains
Co-ordinator, Hazardous Waste Management	Robert Provost BSc.
Chemical Technicians	Mario Reyes BEng.
Radiation Service Technicians	Luis Ponte
	Peter Smith
Manager, Occupational Hygiene and Safety	Margaret Fung BSc., MASc., CIH
Biosafety Officer	John Valant BSc.
Occupational Hygienists and Safety Specialists	Sandra Deike BSc., MHSc. CRSP
	Michal Zitnik BSc., MHSc.
	TBA
Manager, Radiation Protection	Ray Ilson BSc., MEng., CIH, CRSP
Radiation Safety Officers	Sandu Sonoc BSc., MSc.,
	Valerie Phelan BSc.,
	Zenobia Siddiqui BASc.

HEALTH AND WELLBEING PROGRAMS AND SERVICES	
Manager, Health and Well-being Programs and Services	Myra Lefkowitz M.S.W.
Disability and Accommodation Consultants	Kirsty Forrest Marton
	Francilla Charles
Disability and Accommodation Counsellor	Anna Maria Petrone
WSIB Administrator	Anne Chreptak
Occupational Health Nurse	Glenna Hilborn R.N. O.H.N
Occupational Health Physician/Consultant	Gabor Lantos, P Eng, M.B.A. M.D.

Appendix 2
Joint Health and Safety Committees
Status Summary - Calendar Year 2003

#	Committee	# Meetings	# Certified Members	#	Committee	# Meetings	# Certified Members
1	Trades/Utilities	12	13	23	Medical Sciences Building	5	3
2	Police	4	2	24	FitzGerald Building	4	2
3	Library (CUPE 1230)	4	2	25	Best Institute	2	1
4	CUPE 3261	8	11	26	Faculty of Arch.& Landscape Architecture	4	2
5	USWA	4	3	27	Faculty of Dentistry	4	6
6	Faculty of Engineering	5	2	28	Faculty of Forestry	4	1
7	Chemical Engineering	4	2	29	Faculty of Law	4	2
8	Materials Science & Engineering	4	0	30	Faculty of Nursing	4	3
9	Civil Engineering	4	2	31	OISE/UT	4	4
10	Electrical & Computer Engineering	4	3	32	Faculty of Pharmacy	4	2
11	Mechanical Engineering	4	1	33	Faculty of Physical Education & Health	11	5
12	Aerospace Studies	3	2	34	Faculty of Social Work	4	1
13	Sidney Smith Hall	2	3	35	Hart House	4	2
14	Department of Botany	2	1	36	215 Huron Street	4	3
15	Department of Chemistry	4	2	37	Koffler Student Services	5	3
16	Department of Geology	4	0	38	School of Graduate Studies	4	3
17	Department of Economics	4	2	39	School of Continuing Studies	4	1
18	McLennan Building	4	2	40	Simcoe Hall	0	2
19	Department of Zoology	4	4	41	21 King's College Circle.	0	2
20	U of T at Scarborough	3	6	42	Borden Building	4	2
21	U of T at Mississauga	6	3	43	Admissions and Awards	4	3
22	Faculty of Medicine	3	2	44	1 Spadina Crescent	0	1

Appendix 3

Summary of Training Provided by EHS in 2003

COURSE	DESCRIPTION	# of COURSES	# of ATTENDEES
Respiratory Protection	This half-day seminar combines classroom-style presentation with practical instruction in the proper selection, use and care of respirators.	9	45
Understanding Noise	This two-hour seminar provides "noise exposed" employees with information regarding the effects of noise and the control of noise hazards.	4	59
Working in Confined Spaces	This half-day seminar provides an overview of the components and procedures of the University's Confined Spaces Program	4	53
Working in Hot Environments	This 2-hour seminar presents an overview of the hazards associated with working in hot environments and the precautions which should be taken to prevent injuries and other problems due to heat stress.	3	15
Small Scale, Short Duration Asbestos Activities -- A Practical Program	This one-day practical program provides employees with the details they require to safely conduct Type 1 and Type 2 asbestos activities.	1	10
Asbestos: Evaluating and Controlling the Hazard	This 1½-day seminar provides employees with classroom-style instruction about the hazards of asbestos and the work procedures to follow when working with or in close proximity to asbestos-containing materials.	11	187
Biosafety	This 2-hour seminar provides basic information regarding the potential hazards of laboratory work with biological agents, and the safety practices and procedures that can reduce the risks.	10	150
Mould Awareness	This two-hour seminar provides an overview of the potential hazards associated with common mould species found growing in indoor environments and the controls used to prevent mould contamination.	8	122
Manual Materials Handling	This 2-hour seminar is to introduce the concept of ergonomics for materials handling operations and to help participants learn to recognize and apply ergonomic solutions to materials handling operations in the workplace.	1	12
WHMIS (Workplace Hazardous Materials Information)	All employees who work with or in proximity to hazardous chemicals are required to be provided with training which informs them about the potential hazards as well as the safe use of these chemicals EHS provides training to summer employees (mainly students) and participates in seminars organized by departments.	12	407
Occupational Health and Safety Responsibilities: Business Management Program/ Supervising in a Unionized Environment Program	This half-day seminar emphasizes the role and responsibilities of managers/supervisors with respect to health and safety. Included is an overview of health and safety at the university, the responsibilities of the various workplace parties, pertinent legislation and policies, and health and safety resources at the University.	2	49
Office Ergonomics	This two-hour seminar is designed to increase awareness of some of the common causes of fatigue and discomfort while working at Video Display Terminals, to introduce relevant ergonomic principles and to provide examples of how to apply this information to the workplace.	7	76
Laser Safety	This one-day seminar provides laser workers with information regarding the safe use of Class 3b and Class 4 Lasers and Laser Systems.	4	60
Radiation Protection Course	This six-hour seminar provides information on radioactive materials and safe precautions to be taken when working with such materials.	12	312
Radiation Safety (Special Project)		4	81
TOTALS		92	1,638

APPENDIX 4

COMMITTEE MEMBERSHIP

Senior Management Committee on Health and Safety (31st December 2003)

Prof. Angela Hildyard (Chair)	- Vice-President, Human Resources and Equity
Ms Christina Sass-Kortsak	- Assistant Vice-President, Human Resources
Ms. Catherine Riggall	- Assistant Vice-President, Operations & Services
Prof. David Farrar	- Vice-Provost, Students
Prof. Ulrich Krull	- Vice-Principal, Research, UTM
Ms. Kim McLean	- Associate Principal and Chief Administrative Officer, UTSC
Prof. Anastasios Venetsanopoulos	- Dean, Faculty of Applied Science and Engineering
Prof. Anne Lancashire	- Vice Dean, Academic, Faculty of Arts & Science
Prof. Scott Mabury	- Chair, Department of Chemistry
Mr. David Keeling	- Administrative Officer, Faculty of Medicine
Mr Ray deSouza	- Director, Planning and Infrastructure
Dr. James B. Campbell	- Chair, University of Toronto Biosafety Committee
Prof. Robin Marjoribanks	- Chair, Laser Safety Committee
Dr. David Hampson	- Chair, University of Toronto Radiation Protection Authority
Mr Chris McNeill	- Director, Environmental Health and Safety

University of Toronto Radiation Protection Authority (31st December 2003)

Dr. David Hampson(Chair)	Member	Pharmacy
Dr. Maurice Ringuette(Vice-Chair)	Member	Zoology
Dr. Tania Watts	Member	Immunology
Dr. Sela Cheifetz	Member	MRC Group, Peridontal Physiology
Dr. P. Brubaker	Member	Physiology
Dr. Alan Cochrane	Member	Medical Genetics and Microbiology
Dr. Herbert Gaisano	Member	Clinical Sciences
Dr. Angela Lange	Member	Life Sciences, UT Mississauga
Dr. Michael Pharoah	Member	Dentistry
Dr. David Riddick	Member	Pharmacology
Dr. Julie C. Silver	Member	Life Sciences, UT Scarborough
Dr. David Williams	Member	Biochemistry
Mr. Ray Ilson	Ex-Officio	Environmental Health and Safety
Mr Robert Provost	Ex-Officio	Environmental Health and Safety
Mr Chris McNeill	Ex-Officio	Environmental Health and Safety
Ms Christina Sass-Kortsak	Ex-Officio	Human Resources
Ms Shamin Ramjit	Rec. Secretary	Environmental Health and Safety

Laser Safety Committee (31st December 2003)

Prof. Robin Marjoribanks (Chair)	- Physics
Prof. Aephraim Steinberg	- Physics
Prof. James Donaldson	- Chemistry
Prof. Peter Herman	- Electrical & Computer Engineering
Prof. Andreas Mandelis	- Mechanical & Industrial Engineering
Mr. Nokolay Stoev	- VALKOM Laser Consulting
Mr. Chris McNeill	- Environmental Health & Safety

University of Toronto Biosafety Committee (31st December 2003)

Dr. J.B. Campbell (Chairman)	(Medical Genetics and Microbiology)
Dr. C. Bergeron [Tanz Building]*	(CRND)
Dr. S. Cheifetz [Dentistry & FitzGerald Bldg.]*	(Dentistry)
Dr. A.G. Clark [Medical Sciences Building, Banting Inst. & All Other]*	(Medical Genetics and Microbiology)
Dr. J. Coleman [Earth Sciences Building]*	(Botany)
Dr. S. Kish [Clarke Institute of Psychiatry]*	(Clarke Institute of Psychiatry)
Dr. A.B. Lange [U of T Mississauga]*	(Biology, U of T Mississauga)
Dr. A. Marks [Best Institute]*	(BBDMR)
Dr. M. Ringuette [Ramsay Wright Building]*	(Zoology)
Dr. S. Ross [Pharmacy Building]*	(Pharmacy)
Dr. J. Silver [U of T Scarborough]*	(Biology, U of T Scarborough)
Ms. C. Marshall	(Public Affairs)

*Local Biosafety Co-ordinator [jurisdiction in brackets]
Note: Dr. A. Gavin Clark is serving as the Local Biosafety Co-ordinator for all other locations on the St. George campus that do not have an on site co-ordinator.

Members, Ex officio:

Prof. Angela Hildyard	Vice-President, Human Resources and Equity
To Be Advised	Vice-President, Research & International Relations
Mr C. McNeill	Director, Environmental Health & Safety
To Be Advised	Director, Research Grants, ORS
To Be Advised	Vice-Dean, Research, Faculty of Medicine
Mr. J. Valant	University Biosafety Officer

Associate Members:

Mr. R. Ilson	Senior Radiation Safety Officer, U of T
To Be Advised	PMD&C, F&S, U of T
Ms. R. Kogan	Public Health, City of Toronto
Dr. M.S. Mahdy	Ontario Ministry of Health
Mr. M.R. Paull	DOMed, U of T
Dr. R. Renlund	DCM, U of T

Adjunct Members:

Dr. J. Brunton	Toronto Hospital
Dr. M.J. McGavin	Sunnybrook Health Science Centre
Ms. A. Monteath	Hospital for Sick Children
Dr. L. Holness	St. Michael's Hospital
Ms. R. Wallace	Mount Sinai Hospital
Dr. J. Woodgett	Ontario Cancer Institute / Princess Margaret Hospital