1.0 PURPOSE

The Respiratory Protection Program was developed to protect the health of workers, students and visitors from hazardous airborne contaminants. The program aims to ensure that the correct respiratory protection is provided to and properly used by appropriate personnel at the University of Windsor and to comply with applicable codes and regulations regarding respirator use.

2.0 SCOPE

This program applies to all workers, students and visitors who may be exposed to respiratory hazards during the course of their work. It applies at the University of Windsor and at other places where workers and students work.

3.0 DEFINITIONS

CSA: Canadian Standards Association

CSEP: Campus Safety & Emergency Planning

CCC: Chemical Control Centre

NIOSH: A National Institute of Occupational Safety and Health,

OEL: Occupational Exposure Limit

Respirator User: Any individual who uses a respirator during the course of their work or study at the University of Windsor. Respiratory users may include a supervisor, worker, student or visitor.

Supervisors: As defined in the Occupational Health & Safety Act (OHSA)
http://www.labour.gov.on.ca/english/hs/pubs/gl_supervisor.php

Qualitative Fit Test (QLFT): A pass/fail test method that relies on the subject's sensory response to detect a challenge agent in order to assess the adequacy of the respirator fit.

Quantitative Fit Test (QNFT): A fit-test method that uses an instrument to assess the amount of leakage into the respirator in order to assess the adequacy of respirator fit.
Respiratory Protection Factor (RPF); A calculation determined by the Measured level of contamination divided by the Exposure limit for contamination

Workers: As defined in OHSA http://www.labour.gov.on.ca/english/hs/worker_defn.php

4.0 RESPONSIBILITIES

4.1 Campus Safety & Emergency Planning/Chemical Control Centre

Campus Safety & Emergency Planning oversees the Respiratory Protection Program at the University and shall;

- develop and administer the program;
- provide technical advice and recommendations regarding assessments for respiratory hazards;
- assist in determining the type of respiratory protection required for the specific respiratory hazard(s);
- assist in arranging for the fit testing;
- evaluate the effectiveness of the Respiratory Protection Program;
- ensure procedures for medical surveillance are established;
- submit asbestos exposure report form 1 to the Provincial Physician of the Ministry of Labour annually;
- update the program to maintain consistency with regulatory criteria; and
- create and maintain program, training, fit testing and medical records.

4.2 Departments/Faculty

Each Department or Faculty that requires personnel to use a respirator is responsible to ensure that this program is implemented and maintained. All fit testing results, program evaluations and training records shall be maintained by the department or Faculty and sent to Campus Safety & Emergency Planning. Employee Records will be forwarded to Employee Safety & Wellness.

Each department or Faculty shall designate a qualified person(s) (i.e. one who has the knowledge, experience and training to fulfill the responsibilities outlined in this program) to coordinate the program. The departments/faculty shall;

- provide oversight of this program for the department, and be the designated contact to address questions regarding this program;
- obtain a copy of the latest version of the CSA Standard "*Selection, Use and Care of Respirators*";
- order and/or issue respirators and filters;
- work in consultation with Supervisors/Principal Investigators and Campus Safety & Emergency Planning on issues pertaining to this program;
- ensure applicable workers complete the asbestos exposure report form 1 annually and submit the completed forms to Campus Safety & Emergency Planning;
- arrange for a consultant to perform fit testing and respirator training in conjunction with asbestos training or attend 3M Respirator Fit Testing and Training Course, and provide training and fit testing.
- If performing fit testing in house, the department/faculty shall obtain and maintain a 3M Bitrex Fit Respirator Fit Testing Kit; and
- report the number of hours each worker, works on Type 2 or Type 3 asbestos operation (if applicable to your department/faculty). The completed Asbestos Work Report Form 1 shall be sent to Campus Safety & Emergency Planning annually.

4.3 Supervisors

Supervisors shall;

- identify situations where respirators are required;
- conduct, in consultation with the CCC, assessments or respiratory hazards;
- determine (using the Respirator Standards) the type of respiratory protection required for the specific respiratory hazard;
- provide workers with appropriate respiratory protection;
- ensure that health screening, training and fit testing of workers are completed prior to assigning workers a task that requires a respirator;
- ensure that workers use the respirators in accordance with the instructions and the training received;
- ensure that the workers use only those respirators for which they have been qualified;
- ***ensure respirators are cleaned, sanitized, inspected, maintained, repaired, and stored in accordance with training and manufacturer's recommendations;***
- in case of a tight-fitting face piece, ensure that respirator users are clean-shaven and do not have any object or material that would interfere with the seal or operation of the respirator;
- notify the department/faculty and Campus Safety & Emergency Planning of respirator users' concerns, changes in processes, equipment, or operating procedures that have impact on environmental conditions, and respiratory protection requirements;
- notify the department/faculty and Campus Safety & Emergency Planning of the incidents where the use of a respirator may have prevented or contributed to an accident or injury;
- ensure that workers wear appropriate respiratory protection at all times in respiratory hazard areas and;
- in addition to these responsibilities, the responsibilities listed under Respirator User also apply to Supervisors.

4.4 Respirator Users

Respirator Users shall;

- be aware of the respirator requirements in their work area;
- wear respirators as appropriate and check that the respirator is clean and in working condition prior to each use;
- report any respirator that is determined to be defective to their supervisor and remove the respirator from service;
- perform negative and positive pressure check after each donning of a tight-fitting respirator;
- report to their supervisor or other person in authority any condition or change that may impact on their ability to use a respirator safely;
- when using a tight-fitting face piece respirator, ***be clean shaven and ensure that no object or material interferes with the seal or operation*** of the respirator; and
- use the respirator in accordance with the manufacturer's instructions and training received.

5.0 REFERENCES DOCUMENTS

(CSA) Standard Z94.4-02 (Selection, Use and Care of Respirators.
(CSA) Standard Z108.1-00
National Institute for Occupational Safety and Health (NIOSH) or its equivalent,
Ontario Occupational Health and Safety Act.
Asbestos Regulation 278/05 and 279/05.
Ontario Industrial Establishments Regulation (O.Reg.851). "Selection, Use and Care of Respirators"

6.0 PROCEDURE

The University is committed to the protection of University workers and students from the potential health risks associated with exposure to airborne contaminants. If there is a risk of exposure to airborne contaminants and engineering controls are not feasible, appropriate respiratory protection must be used. Personal Protective Equipment (PPE), including respirator protection, is normally the last resort in minimizing the hazards of airborne contaminants.

6.1 Hazard Assessment

The supervisor of the worker, student visitor or of a work area is responsible for identifying the need for a respirator.

Engineering controls shall be considered as the primary means of controlling respiratory hazards (i.e. ventilation, fume hoods, biosafety cabinets, etc.). Respiratory protection is meant to supplement the protection provided by the engineering controls.

Respiratory hazards in certain work areas and laboratories may include but are not limited to airborne contaminants such as dusts, mists, fumes, gases, and/or oxygen-deficient atmospheres. If these hazardous conditions exist in a work area or lab, a respirator shall be worn. Each department is responsible for the cost of supplying the appropriate personal protective equipment (PPE).

6.2 Respirator Selection

Respirators shall not be issued indiscriminately. The need for respiratory protective equipment will be assessed and the appropriate type of respirator for the situation will be selected. The selection criteria used will follow CSA Standard Z94.4-02. Respirator selection shall be selected by the supervisor, department/faculty and done in accordance with Regulations.

Respiratory protection shall be used to protect workers, students and visitors from exposure to all respiratory hazards including but not limited to asbestos. **Please Note**: Although respirator use is optional during Type 1 work, it is University of Windsor policy that respiratory protection is ***mandatory*** for all workers, students and visitors performing Type 1 Work. All respirators shall be NIOSH-approved and where practicable, respirators will be assigned to individual users for their exclusive use.

6.3 Medical Surveillance

Prior to fit-testing and respirator use, the respirator user shall ensure that they are free from any psychological or physiological condition that may preclude him or her from being assigned the use of the selected respirator. This can be done by visiting a general practitioner. The respirator user and supervisor shall complete their respective parts of the respirator user screening form and send a copy to the department/faculty and Campus Safety & Emer. (Please see Appendix A: OHS 4.5.8a)

Individuals that do not meet medical requirements to wear a selected respirator shall not work in an area where the use of a respirator is required.

Campus Safety & Emergency Planning will submit the asbestos exposure report Form 1 submitted by the applicable departments to the Provincial Physician of the Ministry of Labour annually.

6.4 Fit Testing

Supervisors shall ensure that respirator users are required to wear tight-fitting respirators will be fit- tested prior to initial use and every two years thereafter, whenever there is a change in the respirator face piece, and whenever there is a change in the user's physical condition that could affect the respirator fit. A qualitative fit-test (QLFT) is the minimum fit-test required; a quantitative fit test (QNFT) is recommended. The results of the fit test shall be used to select the specific model and size of face piece for the individual user and in accordance with CSA Standard Z94.4-02

Compressed breathing air and air compressors used for supplied-air respirators or self-contained breathing apparatus shall comply with CSA Standard Z180.1-00.

Individuals will not be fit-tested if a good seal cannot be obtained. Possible situations that may prevent a good seal include facial hair and physical deformities.

Individuals that do not pass the fit test shall not work in an area where the use of a respirator is required.

Records of fit-testing shall be maintained by the Department and a copy sent to Campus Safety & Emergency Planning, employee records will be forwarded to Employee Health & Wellness.

6.5 Training

The department/faculty shall arrange or provide respirator training. Individuals, using respirators on a voluntary or mandatory basis shall be included in the training program.

As well as the respirator user, the following persons must be trained to ensure the proper use of respirators:

i. The supervisor of the respirator user
ii. The person issuing respirators
iii. The person performing fit checks
iv. The person maintaining and repairing respirators.

Individuals to be trained and the content of the training shall be repeated annually and meet the requirements set out in CSA Standard Z94.4-02.

Training certificates and copies of the training materials shall be maintained by the Department and a copy sent to Campus Safety & Emergency Planning. Records shall include a list of the individuals trained, a description of training, and the training date. Training records shall be maintained for at least 10 years.

6.6 Use, Care & Maintenance of Respirators

All respirators shall be sanitized, inspected and maintained in accordance with CSA Standard Z94.4-.02

Individuals with beards or stubble at the respirator's sealing edge are not permitted to wear respirators requiring a facial seal (whether they are negative pressure or positive pressure respirators). Any individual who is not clean-shaven at the time a respirator is required shall not be allowed to wear a tight-fitting respirator, even though the person has previously obtained a satisfactory fit when clean-shaven.

Respirators shall be used, cleaned, inspected, maintained and stored by the individual using them, following the instructions provided in the respirator manufacturer's guidelines, training and the regulations.

Respirator users shall inspect face pieces and respirator components prior to use on each day of use and shall report any defective respirators to their Supervisor. These respirators shall be tagged and removed from service until repaired or replaced

Only the use of non-powered half face or full-face respirators are included in this program.

6.7 Signage

Specific work areas (maintenance areas, laboratories, hazardous materials processing areas etc.) that are identified as containing high airborne hazard require external signage. The posted signage must minimally state the following: CAUTION Respiratory Protection Required.

6.8 Record Keeping & Annual Review

All records shall be kept by the department/faculty and Campus Safety & Emergency Planning. Campus Safety & Emergency Planning will keep records for a minimum of 10 years. The program shall be evaluated by the department/faculty, and Campus Safety & Emergency Planning regularly but not less than 3 years.

If deficiencies in the program are identified, the department/faculty shall be responsible for ensuring that remedial measures are developed and communicated with Campus Safety & Emergency Planning for implementation. A record of the evaluation and any corrective actions will be kept on file by Campus Safety & Emergency Planning.

6.9 Respirator Protection Factors and Concentration of Airborne Fibre

The Occupational Exposure Level (OEL) for airborne fibres that a worker is typically allowed to inhale over an 8 hour period is 0.1 fibres/mL (MOL Reg. 279/05, NIOSH REL, the US OSHA PEL and the ACGIH TLV). Typically, respirator protection factors accepted by the MOL (other provinces and the CSA are different) are as follows:

Non-powered half face	10 RPF
PAPR	50 RPF
Pressure Demand	1,000 to 10,000 RPF

Based on these, the maximum allowable airborne concentration while wearing a respirator would be (Protection factor x OEL of 0.1 f/mL):

Non-powered half face	1 fibre/cc.
PAPR (Powered Air Purifying Respirator)	5 fibres/cc.
Pressure Demand	100 fibres/cc (based on 1000 RPF).

7.0 REVISION HISTORY

Date (yyyy/mm/dd)	**Revision**
2025/01/28	Updated to reflect organizational changes CSEP reporting to VPFO, Review moved from annually to min every 3 years

Appendix A: CSEP-2015-09-4.5.8a University of Windsor Respirator User Screening Form

Name: _____ **Occupation / Title:** _____

Employee#
Student #: _____ **Department:** _____ **Supervisor:** _____

Activities requiring respirator use: _____

Avg. frequency of respirator use: ☐ Daily ☐ Weekly ☐ Monthly ☐ Yearly ☐ Other: _____

Please complete this form prior to respirator fit testing.

PART A RESPIRATOR USER'S HEALTH CONDITIONS

1. **Check "Yes" or "No" boxes only. DO NOT specify conditions. Medical information is NOT to be offered on this form.**
   a) Some conditions can seriously affect your ability to safely use a respirator. Do you have or do you experience any of the following, or another condition which may affect respirator use? ☐
   YES ☐ **NO**

Shortness of breath	Breathing difficulties	Chronic bronchitis	Emphysema
Lung disease	Chest pain on exertion	Heart problems	Allergies
Hypertension	Cardiovascular disease	Thyroid problems	Diabetes
Neuromuscular disease	Fainting spells	Dizziness/nausea	Seizures
Temperature susceptibility	Claustrophobia/fear of heights	Hearing impairment	Dentures
Panic attacks		Asthma	Pacemaker
Vision impairment	Colour blindness	Reduced sense of taste	Other condition(s) affecting respirator use
Back/neck problems	Reduced sense of smell		
	Unusual facial features/skin conditions		Prescription medication to control a condition

*** Note medical information is not to be offered on this form ***

b) Have you had previous difficulty while using a respirator? ☐ **YES** ☐ **NO**

c) Do you have any concerns about your future ability to use a respirator safely? ☐ **YES** ☐ **NO**

If **"YES"** was answered to questions a), b) or c), further assessment by a health care professional is required prior to respirator use. Please complete **PART B Health Care Professional Primary Assessment** on next page.

Signature of Respirator User: _____ **Date:** _____

Campus Safety & Emergency Planning use only

Individual is fit for respirator use : ☐ YES ☐ NO Type of Fit Test: ☐ QLFT ☐ QNFT

Respirator Type: Make:_____ Model: _____

☐ Filtering Face Piece ☐ Half Mask ☐ Full Face Piece

Fit Tested by: _____ **Date:** _____

Recertification Date (2 years): _____

For additional respirators please attach a separate sheet

PART B HEALTH CARE PROFESSIONAL PRIMARY ASSESSMENT (if required)

Assessment date: _____

Respirator use permitted: ☐ **YES** ☐ **NO**

Referred to medical assessment: ☐ **YES** ☐ **NO**

Comments: _____

Reassessment date: _____

Name of Health Care Professional (print): _____ **Signature of HCP:** _____

PART C MEDICAL ASSESSMENT (if required)

Assessment date: _____

☐ **Class 1. No Restrictions**

☐ **Class 2. Some specific Restrictions apply (specify):** _____

☐ **Class 3. Respirator use is NOT permitted**

Name of Physician (print): _____ **Signature of Physician:** _____