RESPIRATORY PROTECTION PROGRAM

University of Toronto

April 2017
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1.0 INTRODUCTION AND SCOPE

Although elimination or reduction of respiratory hazards through substitution or engineering controls is preferred, there may be instances in which University workers require the use of appropriate respiratory protection for work, which involves exposure to potentially hazardous environments, such as airborne contaminants (dusts, fumes, mists, gases, vapours, aerosols, and airborne pathogens) or oxygen-deficiency. The Canadian Standards Association (CSA) Standard Z94.4-11 (Selection, Use and Care of Respirators) requires a written respiratory protection program to be in place where respiratory protection is used to protect workers from inhaling hazardous atmospheres.

The basic elements of the Respiratory Protection Program are:

1) Roles and responsibilities;
2) Education of employees on airborne hazards in the work place;
3) Selection of appropriate respirators;
4) Provision of respirator fit testing;
5) Provision of training in the proper use of respiratory protection;
6) Provision of appropriate procedures for cleaning, inspecting, maintaining and storing respirators;
7) Provision of medical surveillance for workers using respiratory protection;
8) Provision for evaluating the effectiveness of this program;
9) Maintenance of training, fit testing, and medical surveillance records;
10) Monitoring of external contractors performing work in environments that require the use of respiratory protection.

Objective

It is the objective of this program to adequately protect the health of all workers coming into contact with hazardous atmospheres, where there is no possibility of implementing engineering or work practice/administrative controls. In addition, this program is meant to increase the awareness of respiratory hazards in the workplace and to inform employees of the means available to protect themselves and others from those hazards.

Scope

This program applies to any worker who may be exposed to respiratory hazards during the course of work at the University.

Note: In this program, "worker" includes faculty, staff, students and visitors.
2.0 DEFINITIONS

**Accepted respirator** – a respirator tested and certified by procedures established by the National Institute for Occupational Safety and Health (NIOSH).

**Air-purifying respirator** – a respirator with an air-purifying filter, cartridge, or canister that removes specific contaminants by passing ambient air through the air-purifying element.

**Assigned protection factor (APF)** – the anticipated level of respiratory protection that would be provided by a properly functioning respirator or class of respirators to properly fitted and trained users.

**Atmosphere-supplying respirator** – a respirator that supplies the respirator user with breathing air/gas from a source independent of the ambient atmosphere.

**Bioaerosol** – a liquid droplet (generated, for example by coughing, sneezing or a medical procedure) or a solid particle (generated, for example, by sweeping or shovelling) suspended in air and that is living or originates from living organisms. Bioaerosols include living or dead micro-organisms, fragments, toxins, and particulate waste products from all varieties of living things. They are capable of causing infection or adverse or allergic response.

**Fit test** – the use of qualitative or quantitative method to evaluate the fit of a specific make, model, and size of a respirator on an individual.

**Hazardous atmosphere** – any atmosphere that is oxygen-deficient, exceeds occupational exposure limits, presents a fire/explosion hazard, and/or contains an airborne toxic or disease-producing contaminant in concentrations deemed to be hazardous.

**Health Care Professional** – an individual who is licensed by a provincial licensing authority or equivalent to practice medicine or nursing and who possesses relevant experience and knowledge in the field of occupational health and safety.

**Immediately Dangerous to Life and Health Atmosphere (IDLH)** – an atmosphere that poses an immediate threat to life, would cause adverse health effects, or would impair an individual’s ability to escape.

**Qualified Person** – an individual who possesses the knowledge, experience, and training to fulfil the competencies of the roles defined in this Program.

**Quantitative fit test** – a test method that uses an instrument to assess the amount of leakage into the respirator in order to assess the adequacy of respirator fit.
**Qualitative fit test** – 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 respirator fit.

**Respirator** – a device to protect the user from inhaling a hazardous atmosphere.

**Service Life** – the period of time during which a respirator provides adequate protection to the user.

**User seal check** – an action conducted by the respirator user to determine if the respirator is properly sealed to the face.

**Tight-fitting facepiece** – a respirator inlet covering that forms a complete seal with the face. This includes a half-facepiece that covers the user’s nose and mouth under the chin; and a full-facepiece that covers the user’s nose, eyes, and mouth under the chin.
3.0 RESPONSIBILITIES

3.1 Principal Investigators/Supervisors and All Others in Authority

Principal Investigators/supervisors and all others in authority shall:

- Identify situations where respirators are required;
- Conduct, in consultation with the Office of Environmental Health and Safety (when necessary), assessments for respiratory hazards;
- Determine (using the Respirator Standard or in conjunction with the Office of Environmental Health and Safety) 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 trained and fit-tested for;
- Ensure respirators are cleaned, sanitized, inspected, maintained, repaired, and stored in accordance with training and manufacturer’s recommendations;
- In case of a tight-fitting facepiece, 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 Office of Environmental Health and Safety (EHS) of respirator users’ concerns, changes in processes, equipment, or operating procedures that have impact on environmental conditions, and respiratory protection requirements;
- Notify the Office of Environmental Health and Safety of the incidents where the use of a respirator may have prevented or contributed to an accident or injury;
- Provide details of the type of respirator selected and the anticipated working conditions to the health care professional conducting the medical assessment of a respirator user and;
- Ensure that workers wear appropriate respiratory protection at all times in respiratory hazard areas.

3.2 Workers (Respirator Users)

Workers (Respirators Users) shall:

- Wear appropriate respiratory protection at all times when performing tasks or working in an area where respiratory hazards exist;
- Inspect the respirator prior to each use in accordance with the training received;
- Clean, maintain and store the respirators in accordance with the training received and the manufacturer’s instructions;
- Perform negative and positive pressure/seal checks after each donning of a tight-fitting respirator;
- Report any damage or malfunction of the respirator to their supervisor;
- Report to their supervisor or other person in authority any condition or change that may impact their ability to use a respirator safely;
- When using a tight-fitting facepiece respirator, be clean shaven and ensure that no object or material interferes with the seal or operation of the respirator;
- Use the respirator in accordance with the written instructions and training received.

### 3.3 Office of Environmental Health and Safety (EHS)

The Occupational Hygiene and Safety section of the Office of Environmental Health and Safety is responsible for all aspects of the Respiratory Protection Program. This includes:

- Developing and administering the program;
- Providing technical advice and recommendations regarding assessments for respiratory hazards;
- Assisting supervisors in determining the type of respiratory protection required for the specific respiratory hazard(s);
- Providing training and education;
- Fit testing;
- Evaluating of Respiratory Protection Program effectiveness;
- Ensuring that procedures for health surveillance are established;
- Updating the program to maintain consistency with regulatory criteria and consensus standards;
- Creating and maintaining training and fit testing records;

### 3.4 EHS – Occupational Health

The Occupational Health section of the Office of Environmental Health and Safety shall:

- Have knowledge of the health effects associated with the respiratory hazards to which the user might potentially be exposed;
- Have knowledge of the physiological burden and psychological stresses associated with the use of the selected respirator under the anticipated working conditions;
- Assess the suitability of the user to safely use the selected respirator;
- Determine what tests, evaluations, etc., are necessary to make the determination whether an employee is medically fit to wear respiratory protection equipment;
- Report to the program administrator whether the user meets medical requirements, medical requirements with limitations, or does not meet medical requirements to use the selected respirator;
- Perform medical surveillance, as appropriate, for specific hazardous respiratory toxins, allergens, or pathogens;
- Maintain medical records.
4.0 HAZARD ASSESSMENT

In order to determine the presence of a respiratory hazard and to assist in the selection of an appropriate respirator, a hazard assessment of the work area shall be conducted by the supervisor in consultation with EHS (if necessary). The hazard assessment of a respiratory hazard includes the following:

- Identification of contaminants (chemical, biological) that are or may be present in the workplace;
- Identification of physical states of all airborne contaminants;
- Determination of the likelihood of inhalation of the contaminants;
- Measurement or estimation of the concentration of the contaminants;
- Determination of oxygen level (potential oxygen deficiency);
- Identification of appropriate occupational exposure limit for each airborne contaminant;
- Determination of whether the atmosphere is immediately dangerous to life and health (IDLH);
- Determination of applicable health regulation or a substance-specific standard for the contaminants;
- Determination for particulate hazards if there is oil present;
- Determination of skin or eye absorption and irritation characteristics.

In instances where exposure cannot be identified or reasonably estimated, the atmosphere shall be considered IDLH.

The workplace atmosphere shall be assessed on a regular basis for respiratory hazards to confirm that the proper type of respirator is being used.
5.0 RESPIRATOR SELECTION

Respirator selection shall be based on a systematic review of the hazards and knowledge of standards, regulatory criteria, and manufacture information on the types of respirators and their limitations to ensure that appropriate respirators are selected for the intended conditions of use.

5.1 SELECTION OF RESPIRATORS FOR PROTECTION AGAINST NON-BIOAEROSOL WORKPLACE CONTAMINANTS

5.1.1 Respirators shall be selected based on the following criteria:
- Health of the worker and ability to wear a respirator;
- Review of the hazard assessment;
- Existing legislation and standards;
- Work requirements and conditions;
- Duration of exposure;
- Characteristics and limitations of respirators;
- Respirator assigned protection factors (Appendix C)

5.1.2 Only accepted (NIOSH-approved) respirators shall be selected and used.

5.1.3 Respirators shall be selected by supervisors in consultation with EHS.

5.1.4 Respirator Selection Chart (Figure 1) can be used to assist in the selection of an appropriate respirator.

5.1.5 Workers shall be issued only those respirators for which they have been fit-tested and medically approved.

5.1.6 For air-purifying respirators for gases and vapours with no end-of-service-life indicator, the supervisor shall establish a change-out schedule for the replacement of the cartridges (based on manufacturer information). Should the need arise, EHS can assist the supervisor with setting up the change-out schedule.

5.1.7 Where an IDLH atmosphere is identified, only pressure-demand self-contained breathing apparatus (SCBA) or a combination pressure-demand supplied air respirator with auxiliary self-contained air supply, with a minimum rated service time of 15 minutes shall be used.

5.1.8 Respirators approved for escape only shall not be used for non-emergency applications.

5.1.9 Atmosphere-supplying respirators that make use of compressed air for breathing shall meet CSA Standard Z180.1-13 Compressed Breathing Air and Systems.
5.1.10 Atmosphere-supplying respirators that make use of ambient breathing air system shall meet CSA Standard Z180.1-13 Compressed Breathing Air and Systems.

5.1.11 Workers that require an atmosphere-supplying respirator must notify EHS and receive additional training.

5.2 SELECTION OF RESPIRATORS FOR PROTECTION AGAINST BIOAEROSOLS

When respirators to protect against bioaerosols are being selected, airborne transmissibility shall be confirmed and the infectivity of the bioaerosol shall be taken into consideration.

A control banding approach shall be used for selection of respiratory protection against bioaerosols that are capable of causing infection or adverse or allergic response and have no established occupational exposure limits (OELs) or in the absence of regulations or other guidance. Control banding shall be used in conjunction with health and safety practices.

Control banding is a process in which risk factors are assessed using variables that are organized into ranges or bands; each variable is divided into four bands. The following three variables will be used to determine the appropriate level of respiratory protection:

(a) The risk group [nature of the hazard (bioaerosol type) and availability of treatment];
(b) The generation rate (from human release, activities or equipment); and
(c) The control level (e.g. ventilation).

The level of respiratory protection shall be determined as follows:

Step 1: Identify the bioaerosol (known or suspected)
Step 2: Confirm that a risk of transmission of disease, infection, or adverse health effect is produced from inhalation of the bioaerosol
Step 3: Select applicable control banding wheel: general workplace environments or health care facilities (see Figure 2 or 3)
Step 4: Determine the bioaerosol risk group (R1, R2, R3, or R4)
Step 5: Determine the generation rate (G1, G2, G3, or G4)
Step 6: Determine the control level (C1, C2, C3 or C4)
Step 7: Identify the number and colour of the segment selected at the intersection of the items identified in Steps 4 to 6. This corresponds to the range of options in the hierarchy of respiratory protection shown in Figure 4. The respirator shall be selected based on the level of protection identified in Figure 4.

Refer to Appendix B for case scenarios using selection wheels in Figure 2 and Figure 3.
Figure 1: Guide to Respirator Selection

SCBA - Self-Contained Breathing Apparatus
PP - Positive Pressure
IDLH - Immediately Dangerous to Life and Health
PAPR - Powered Air-Purifying Respirator

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Figure 2: Control Banding Approach for Bioaerosols in General Workplace Environments

<table>
<thead>
<tr>
<th>General workplace environments</th>
<th>Risk group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents not associated with disease or serious adverse health effects in healthy adult humans</td>
<td>R1</td>
</tr>
<tr>
<td>Agents associated with human disease or adverse health effects that are rarely serious and for which preventive or therapeutic interventions are usually available</td>
<td>R2</td>
</tr>
<tr>
<td>Agents associated with serious or lethal human disease or adverse health effects for which preventive or therapeutic interventions might be available (high individual risk but low community risk)</td>
<td>R3</td>
</tr>
<tr>
<td>Agents likely to cause serious or lethal human disease or adverse health effects for which preventive or therapeutic interventions are not usually available (high individual risk and high community risk)</td>
<td>R4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Generation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low release of bioaerosol/pathogen — vacuuming with a HEPA filter</td>
</tr>
<tr>
<td>Medium release of bioaerosol/pathogen — soaking then shovelling</td>
</tr>
<tr>
<td>High release of bioaerosol/pathogen — misting then shovelling</td>
</tr>
<tr>
<td>Very high release of bioaerosol/pathogen — dry sweeping</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor — poorly ventilated $ACH \leq 1$</td>
</tr>
<tr>
<td>Indoor — ventilation $1 &lt; ACH \leq 4$</td>
</tr>
<tr>
<td>Outdoor — no wind</td>
</tr>
<tr>
<td>Indoor — ventilation $4 &lt; ACH \leq 6$</td>
</tr>
<tr>
<td>Outdoor — low wind</td>
</tr>
<tr>
<td>Indoor — ventilation $&gt; 6$</td>
</tr>
<tr>
<td>Outdoor — moderate wind</td>
</tr>
</tbody>
</table>
Figure 3: Control Banding Approach for Bioaerosols in Health Care Facilities
Figure 4: Hierarchy of respiratory protection

<table>
<thead>
<tr>
<th>Acceptable level</th>
<th>Air-purifying options</th>
<th>APF</th>
<th>Atmosphere-supplying options</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No air-purifying option available</td>
<td>10000</td>
<td>SCBA (pressure-demand) full-facepiece</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SCBA (pressure-demand) tight-fitting hood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Multi-functional SCBA/airline</td>
</tr>
<tr>
<td>4 to 5</td>
<td>Powered air-purifying full-facepiece</td>
<td>1000</td>
<td>Airline (continuous-flow) full-facepiece</td>
</tr>
<tr>
<td></td>
<td>Powered air-purifying helmet/hood with SWPF study</td>
<td></td>
<td>Airline (pressure-demand) full-facepiece</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Airline (continuous-flow) helmet/hood with SWPF study</td>
</tr>
<tr>
<td>3 to 5</td>
<td>Powered air-purifying half-facepiece</td>
<td>50</td>
<td>Airline (pressure-demand) half-facepiece</td>
</tr>
<tr>
<td></td>
<td>Air-purifying (negative-pressure) full-facepiece</td>
<td></td>
<td>Airline (continuous-flow) half-facepiece</td>
</tr>
<tr>
<td>2 to 5</td>
<td>Powered air-purifying loose-fitting facepiece/visor</td>
<td>25</td>
<td>Airline (continuous-flow) loose-fitting facepiece/visor</td>
</tr>
<tr>
<td></td>
<td>Powered air-purifying helmet/hood without SWPF study</td>
<td></td>
<td>Airline (continuous-flow) helmet/hood without SWPF study</td>
</tr>
<tr>
<td>1 to 5</td>
<td>Air-purifying (negative-pressure) half-facepiece (including filtering facepieces)</td>
<td>10</td>
<td>No atmosphere-supplying option available</td>
</tr>
<tr>
<td></td>
<td>No respiratory protection required</td>
<td>&lt;1</td>
<td>No respiratory protection required</td>
</tr>
</tbody>
</table>

Notes:
(1) See Tables 1 and 2 for fit test pass/fail criteria for tight-fitting respirators.
(2) Fit testing is not required for loose-fitting respirators.
6.0 RESPIRATOR FIT TESTING

6.1 The workers must pass an appropriate quantitative or qualitative fit test when using a respirator with a tight-fitting face piece.

6.2 The fit testing shall be conducted by the Occupational Hygiene and Safety section of the Office of Environmental Health and Safety (EHS) or individual who has completed a Respirator Fit-Testing Train-the-Trainer session coordinated by EHS.

6.3 The fit-tester shall be competent in the applicable fit test methods and be able to verify a user’s ability to obtain an effective respirator seal, comfort, and fit for a tight-fitting respirator.

6.4 The worker must demonstrate the required level of competency in donning and doffing the respirator, as well as inspecting and performing a user seal check.

6.5 A fit test shall be carried out
  a) prior to initial use of a tight-fitting respirator
  b) after completion of EHS Respiratory Protection training information session
  c) after completion of Respirator User Screening Form (Appendix E)
  d) at least every 2 years
  e) whenever there is a change in respirator (make, model, or size)
  f) when a respirator user experiences continued significant discomfort during use or difficulty in completing a successful user seal check
  g) if there is a change in PPE use that could affect the respirator
  h) whenever the employee reports, or the health care professional, supervisor, or EHS makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but not limited to:
     ▪ facial scarring
     ▪ dental changes
     ▪ cosmetic surgery
     ▪ obvious change in body weight
     ▪ facial rash (dermatological condition)

6.6 The worker shall be fit tested with the same make, model, style and size of respirator to be used.

6.7 The fit test shall be performed only on workers who are clean-shaven where the facepiece seals to the skin. CSA Z94.4-11 (Selection, Use and Care of Respirators) provides illustrations of acceptable and unacceptable facial hair for tight-fitting respirators. Individuals that are not clean-shaven will not be fit-tested.

6.8 When a worker is required to wear other personal protective equipment, such as eye, face, head and hearing protection during his/her course of work, the same
protective equipment shall be worn during the fit test to ensure that they are compatible with the respirator and do not break the facial seal.

6.9 A respirator fit-test card will be issued to a worker upon successful completion of training and fit-test. The fit-test card indicates the respirator manufacturer, model, size, and expiry date.

6.10 A worker must only use the specific respirator (same manufacturer, model, and size) he/she was fit-tested with.

7.0 TRAINING

7.1 All workers whose work requires the use of a respirator shall receive appropriate training and education.

7.2 The workers shall receive training prior to the initial use of the respirator.

7.3 Training shall be provided by EHS.

7.4 The training shall include the following:

- Why respiratory protection is necessary;
- The limitations and capabilities of respiratory equipment;
- Respiratory hazard assessment;
- Respirator selection process;
- Respirator care and use (e.g. inspect, put on and remove a respirator, and how to perform user seals checks, etc.);
- Procedures for maintenance and storage of respiratory equipment;
- How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator;
- General requirements of the Respiratory Protection Program.

7.5 Refresher training shall be provided every two years to all respirator users.

7.6 Records of the training shall be updated and maintained by EHS.
7.7 Training in the use of self-contained breathing apparatus (SCBA), if required, shall be provided by a qualified external trainer.

8.0 USE OF RESPIRATORS

8.1 Prior to being assigned any task that requires the use of a respirator, the worker shall complete all the health screening, fit testing and training requirements.

8.2 Workers with facial hair that may interfere with the facepiece seal or valve function on tight-fitting respirators cannot use a tight-fitting respirator. CSA Z94.4-11 (Selection, Use and Care of Respirators) provides illustrations of acceptable and unacceptable facial hair for tight-fitting respirators. Individuals must be clean-shaven where the respirator forms a seal with the face.

8.3 Other personal protective devices or equipment shall not interfere with the seal of the facepiece to the face of the worker.

8.4 Side arms on eyeglasses or any other material such as hair, cloth, tissue, straps and jewellery shall not come between the face and the sealing surface of the facepiece or interfere with the seal of the tight-fitting facepiece to the face or with the operation of the respirator. Workers who must have corrective eyewear, where the eyewear interferes with the respirator seal, shall be provided with the proper respirator spectacle kit by their department.

8.5 The worker shall check the seal of the facepiece immediately after donning the respirator.

8.6 The worker should never break the respirator face-to-facepiece seal to communicate.

8.7 Workers shall not remove their facepieces at any time while working in an IDLH atmosphere.

8.8 Workers shall be permitted to leave the hazardous area for any respirator-related reason. The worker shall leave the hazardous area when:
• The respirator fails to provide adequate protection;
• The respirator malfunctions;
• He/she detects air leakage around the face seal;
• He/she detects an odour or tastes a chemical;
• He/she has increased breathing resistance;
• He/she experiences any illnesses or discomforts such as dizziness, nausea, weakness, breathing difficulties, sneezing, fever, chills, confusion, etc.;
• He/she experiences extreme discomfort from wearing the respirator;
• He/she needs to wash his/her face and facepiece to minimize skin irritation;
• Components (including air tanks) or purifying devices need change-out.

8.9 The respirator shall not be altered in any manner.

8.10 Disposable particulate filtering facepiece respirators such as an N95 are single use respirators and must be disposed of after each use.

8.11 All cartridges, replacement parts, etc., shall be from the same manufacturer as the respirator (e.g., use only NORTH cartridges and parts for a NORTH respirator).

8.12 A change-out schedule shall be established for the replacement of air-purifying filters or cartridges of respirators before their useful service life is ended. Change-out can include end-of-service life indicators, maximum use time, manufacturer information, and breathing resistance as appropriate.

8.13 Warning properties (odour, irritation) of the contaminant shall not be relied on for cartridge change-out.

8.14 Where respirators are used for HAZMAT response, confined space entry etc., the appropriate existing legislation, regulations, standards and guidelines shall be consulted.

8.15 Individuals who are unwilling or otherwise unable to comply with the interference-free requirement, or who are unable to obtain an acceptable fit, shall be prohibited from using a tight-fitting respirator.

9.0 CLEANING, INSPECTION, MAINTENANCE, AND STORAGE OF RESPIRATORS

8.16 The University shall provide each worker requiring a respirator with a respirator that is clean, sanitary and in good working order.

8.17 Each worker issued a respirator shall properly maintain his/her respirator to retain its original effectiveness. The maintenance shall include:
• Cleaning and sanitizing
• Inspection, testing, and repair;
• Proper storage; and
• Recordkeeping

8.18 Defective or non-functioning respirators shall be identified as out of service (e.g. by being tagged) and shall be replaced or removed from service until repaired.

8.19 The respirator shall be cleaned and sanitized according to the respirator manufacturer’s instructions and/or according to procedures found in Appendix D – Procedures for Respirator Maintenance.
8.20 Respirators designed not to be cleaned (e.g. N95) shall be disposed of after use.

8.21 The frequency of cleaning shall depend on how many workers use the respirator and what it is used for.
- Respirators issued to individual workers shall be cleaned and disinfected as often as necessary to maintain proper hygiene.
- A single respirator issued to multiple workers must be cleaned and disinfected before each use.
- Respirators designated for emergency use only must be cleaned and disinfected after each use.

8.22 The worker shall inspect their respirator before and after each use. The procedure for respirator inspection is found in Appendix D – Procedures for Respirator Maintenance.

8.23 The worker shall report defective or non-functioning respirators to their supervisor. These respirators shall be tagged and removed from service by the supervisor until repaired or replaced.

8.24 Any respirator repairs shall be performed by the unit manufacturer or by a qualified external contractor. Defective or non-functioning half mask facepieces shall not be repaired but will be disposed and replaced instead.

8.25 The worker shall store their respirators in a clean and sanitary location, in boxes or in plastic bags, marked with each worker’s name. The respirators shall be stored in a manner that will protect them from dust, ozone, sunlight, heat, extreme cold, excessive moisture, vermin, damaging chemicals, oils, greases, or any other potential hazard that may have a detrimental effect on the respirator.

8.26 Respirators shall be stored in a manner that will prevent deformation of rubber or other elastomeric parts.

8.27 Used cartridges/filters to be re-used shall be stored in a manner to prevent contamination of the respirator facepiece.

10.0 MEDICAL SURVEILLANCE

10.1 Prior to fit testing and respirator use, it shall be confirmed that the worker is free from any physiological or psychological condition that may prevent him or her from using the selected respirator. This shall be achieved through the use of the Respirator User Screening Form (Appendix E).
10.2 The worker and his/her supervisor shall complete their respective parts of the Respirator User Screening Form and submit the form to EHS at the time of fit-testing.

10.3 Where, based on the Respirator User Screening Form, EHS is concerned that a physiological or psychological condition exists that may preclude the use of a respirator, EHS shall refer the worker to Occupational Health for a medical evaluation.

10.4 The medical evaluation shall consist of a primary assessment conducted by the Occupational Health Nurse and if deemed necessary a further assessment conducted by the Occupational Health Physician.

10.5 The worker, his or her supervisor, and EHS shall provide the Occupational Health Nurse and/or the Occupational Health Physician with information regarding the conditions of the respirator use and the type of respirator(s) required.

10.6 After the medical evaluation, the Occupational Health Physician shall provide a written opinion (Part E of the Respirator User Screening Form) regarding the employee’s ability to use a respirator. The opinion shall indicate one of the following:
   a) User meets medical requirements to use the selected respirator;
   b) User meets medical requirements to use the selected respirator with limitations;
   c) User does not meet medical requirements to use the selected respirator.

10.7 The re-evaluation of the worker shall not be performed on an annual basis. The re-evaluation shall be performed based on one of the following criteria:
   a) The worker reports signs or symptoms that are relevant to the worker’s ability to use a respirator;
   b) The Occupational Health Physician, supervisor or EHS considers it necessary for the worker to be re-evaluated;
   c) A change in workplace conditions occurs that may result in substantial increase in the physiological burden that respirator use places on the worker.

10.8 Workers who do not meet medical requirements to use a selected respirator shall not work in an area where the use of a respirator is required.

11.0 PROGRAM EVALUATION

11.1 The Respiratory Protection Program shall be reviewed annually by EHS.

11.2 The review of the program shall include:
   a) A review of program elements against regulatory requirements;
b) A review of definitions of roles and responsibilities;
c) A review of documented program procedures;
d) Examination of records to verify that documented procedures are being followed;
e) Confirmation that workplace practices comply with program requirements;
f) Documentation of performance problems and subsequent resolution or corrective action plans;
g) Stakeholder input to verify worker acceptance (comfort, ease of breathing, fatigue, vision, mobility, job interference, utility);
h) Proper selection, use and maintenance of respirators;
i) Effective training of all stakeholders;
j) Proper inspection of respirators; and
k) Proper storage and maintenance of respirators.

11.3 EHS shall review the information derived from the medical and biological monitoring performed, where available.

12.0 RECORDKEEPING

12.1 Supervisors shall maintain records of the following:
   a) Training for workers under their supervision
   b) Respirator selection
   c) Inspection, maintenance and storage

12.2 EHS shall maintain the records of the following:
   a) Fit testing
   b) Training
   c) Hazard assessment
   d) Respirator selection
   e) Program evaluation

12.3 The fit testing records shall consist of the following:
   a) name and identification of the worker tested
   b) type of test performed
   c) make, model and size of the respirator fitted
   d) date of the fit test
   e) result of the fit test
   f) name of the person conducting the fit test

12.4 Occupational Health shall maintain the medical records for the workers that have undergone medical evaluations. These records shall be treated as medically confidential.
13.0 EXTERNAL CONTRACTORS

13.1 All external contractors must be able to demonstrate compliance with the requirements outlined in this program.

13.2 Before authorizing work in an area where a respiratory hazard has been identified, the department retaining the contractor shall provide a report to the prospective contractor as part of the work specification. The report shall contain the hazard assessment of the area.

13.3 External contractors must provide written evidence that their workers have undergone a medical evaluation, received appropriate respiratory training and that they have been fit tested for the appropriate respirators.
APPENDIX A: Classification and Description of Respirators by Mode of Operation

1) Air-Purifying Respirators

Air-purifying respirators can be used to protect against airborne contaminants such as dusts, mists, fumes, smokes, aerosols, gases and vapours. Since these respirators are air-purifying only, this type of respiratory protection must NEVER be used in oxygen-deficient atmospheres or situations that are immediately dangerous to life and health (IDLH).

The general categories of air-purifying respirators are:

a) Particulate (dust, fume and mist)
b) Gas and Vapour
c) Combination of Particulate and Gas/Vapour

The air-purifying respirators are available in two modes of operation: 1) Non-powered and 2) Powered. The non-powered respirators come in two designs: 1) half mask and 2) full facepiece. (Quarter mask and mouthpiece respirators are also available but are not recommended). The powered respirators contain a blower and are equipped with a facepiece, helmet or hood.

At the University, air-purifying respirators are commonly used. Examples of the most commonly used non-powered air-purifying respirators include:

- Disposable half-face particulate filtering respirators such as an N95 where the entire facepiece acts as a filter medium. These respirators remove particulate material such as dusts, mists, fumes and biological contaminants from the air. These respirators are single use respirators and must be disposed of after each use.

- Elastomeric half-face respirators have a silicone or rubber facepiece that fits over the nose and under the chin and has one or more filters or cartridges attached onto the facepiece. The cartridges or filters for elastomeric respirators are reusable.

- A full-face elastomeric respirator is like a half-facepiece but covers the entire face from the hairline to below the chin. A clear lens is built into the facepiece.
2) Atmosphere-Supplying Respirators

a) Supplied Air Respirators

The supplied air respirator consists of a half-mask, full facepiece, hood or helmet to which respirable air is supplied through a small diameter hose. Two types of flow may be used: 1) continuous-flow to the mask in which the flow maintains the mask under positive pressure at moderate work rates; and 2) pressure-demand, which keeps the mask under positive pressure at moderately high work rates but limits the air quantity used to that required for breathing. Demand airflow, which allows the pressure inside the mask to become negative during inhalation, is not recommended because it does not provide as much protection. The respirable supplied-air comes from A) a compressor or B) compressed air cylinder(s).

Supplied air respirators may be used in IDLH or oxygen-deficient atmospheres only if an auxiliary tank of air is incorporated into the respirator system.

b) Self-Contained Breathing Apparatus (SCBA)

SCBAs comprise of a full facepiece connected to a source of air carried by the wearer. The SCBAs provide respiratory protection in oxygen-deficient environments and in situations where high or unknown concentrations of toxic gases, vapours or particulates are present. The SCBA can also provide protection in emergency situations. When using an SCBA, the user’s respiratory system is isolated from the surrounding atmosphere because no outside air is admitted into the respirator facepiece. There are three types: 1) open-circuit devices; 2) closed-circuit (re-breathing) devices; and 3) escape units. Two types of flow are available: 1) pressure demand and 2) demand. The demand SCBAs must not be used in oxygen-deficient atmospheres or IDLH atmospheres because they allow the pressure inside the facepiece to become negative.

3) Combination Atmosphere-Supplying and Air-Purifying Respirators

These devices usually consist of an atmosphere-supplying respirator with an auxiliary air-purifying attachment that provides protection in the event that the air supply fails. A combination atmosphere-supplying respirator with an auxiliary air-purifying element may be used only when the concentration of airborne contaminants in the workplace does not exceed the maximum use concentration of the respirator when used in the air-purifying mode.
A worker is directed to go into a warehouse that has been occupied by pigeons for many years. Piles of pigeon excrement about a metre deep are found under roosting locations. The clean-up will be done indoors with no additional ventilation.

### Step 1
Identify the bioaerosol.
**Histoplasma capsulatum**

### Step 2
Transmission of disease, infection, or adverse effects produced from inhalation of bioaerosol.
**Yes (histoplasmosis)**

### Step 3
Select applicable, control banding wheel: health care facility or general workplace environment (see Figure 2 or 3)
**General workplace environment – Figure 2**

### Step 4
Determine the bioaerosol risk group (R1, R2, R3 or R4)
**R3: Agents associated with serious or lethal human disease or adverse health effects for which preventive or therapeutic interventions might be available (high individual risk but low community risk)**

### Step 5
Determine the generation rate (G1, G2, G3, or G4)
**G3 – Misting then shovelling**

### Step 6
Determine the control level (C1, C2, C3 or C4)
**C1 – Indoor – Poorly ventilated ACH \( \leq 1 \)**

### Step 7
Identify the number and colour of the segment selected at the intersection of the variables identified in Steps 4 to 6:
**R3, G3, C1 = Orange/No. 3** See Figure 4 to determine the assigned protection factor corresponding to Orange/No. 3 – APF 50.
- Air-purifying (negative-pressure) full-facepiece;
- Powered air-purifying half-facepiece
- Airline (pressure-demand) half-facepiece; or
- Airline (continuous-flow) half-facepiece
Scenario 1: Histoplasmosis

R3, G3, C1 = Orange/No. 3. See Figure 4 to determine the assigned protection factor corresponding to Orange/No. 3 – APF 50.

- Air-purifying (negative-pressure) full-facepiece;
- Powered air-purifying half-facepiece
- Airline (pressure-demand) half-facepiece; or
- Airline (continuous-flow) half-facepiece
Scenario 2: Tuberculosis exposure

A dental hygienist is working in the clinic on a patient who has been diagnosed with pulmonary mycobacterium tuberculosis and has a cough.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Identify the bioaerosol.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mycobacterium tuberculosis</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Transmission of disease, infection, or adverse effects produced from inhalation of bioaerosol.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Yes, pulmonary mycobacterium tuberculosis</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Select applicable, control banding wheel: health care facility or general workplace environment (see Figure 2 or 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Health care facility – Figure 3</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Determine the bioaerosol risk group (R1, R2, R3 or R4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>R3: Agents associated with serious or lethal human disease or adverse health effects for which preventive or therapeutic interventions might be available (high individual risk but low community risk)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Determine the generation rate (G1, G2, G3, or G4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>G3 – Patient coughing or sneezing with mouth uncovered</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 6</th>
<th>Determine the control level (C1, C2, C3 or C4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>C2 – Corridor or patient room, 3-6 ACH</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 7</th>
<th>Identify the number and colour of the segment selected at the intersection of the variables identified in Steps 4 to 6:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>R3, G3, C2 = Green/No. 1.</strong> See Figure 4 to determine the assigned protection factor corresponding to Green/No. 1 – APF 10.</td>
</tr>
<tr>
<td></td>
<td>- Air-purifying (negative-pressure) full-facepiece (including filtering facepieces (e.g. N95))</td>
</tr>
<tr>
<td></td>
<td>- No atmosphere-supplying option available</td>
</tr>
</tbody>
</table>
Scenario 2: Tuberculosis exposure

**Healthcare facilities**

<table>
<thead>
<tr>
<th>Risk group</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents not associated with disease or serious adverse health effects in</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>healthy adult humans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agents associated with human disease or adverse health effects that are</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rarely serious and for which preventive or therapeutic interventions are</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>usually available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agents associated with serious or lethal human disease or adverse health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effects for which preventive or therapeutic interventions might be available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(high individual risk but low community risk)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agents likely to cause serious or lethal human disease or adverse health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effects for which preventive or therapeutic interventions are not usually</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>available (high individual risk and high community risk)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Generation rate

- Patient not coughing or sneezing: G1
- Patient coughing or sneezing with mouth covered: G2
- Patient coughing or sneezing with mouth uncovered: G3
- Aerosol-generating procedures: G4

### Control level

- Poorly ventilated, <2 air changes per hour (ACH): C1
- Corridor or patient room, 3–6 ACH: C2
- Negative pressure, laboratory, autopsy, 6–12 ACH: C3
- Surgery >12 ACH: C4

**R3, G3, C2 = Green/No. 1.** See Figure 4 to determine the assigned protection factor corresponding to Green/No. 1 – APF 10.

- Air-purifying (negative-pressure) full-facepiece (including filtering facepieces (e.g. N95))
- No atmosphere-supplying option available
**APPENDIX C: Assigned Protection Factors (APF)**

<table>
<thead>
<tr>
<th>Respirator Type</th>
<th>CSA Z94-4-11</th>
<th>OSHA</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Purifying</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Half facepiece</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Full facepiece</td>
<td>50 (QLFT 10)</td>
<td>50</td>
<td>101/502</td>
</tr>
<tr>
<td><strong>Powered Air Purifying</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loose-fitting facepiece</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Half facepiece</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Full facepiece</td>
<td>1000</td>
<td>1000</td>
<td>50</td>
</tr>
<tr>
<td>Helmet or hood</td>
<td>25/1000³</td>
<td>25/1000³</td>
<td>25</td>
</tr>
<tr>
<td><strong>Air Line</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuous Flow Supplied Air</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loose fitting facepiece</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Half facepiece</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Full facepiece</td>
<td>1000</td>
<td>1000</td>
<td>50</td>
</tr>
<tr>
<td>Helmet or hood</td>
<td>25/1000³</td>
<td>25/1000³</td>
<td>25</td>
</tr>
<tr>
<td><strong>Air Line</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Demand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Half facepiece</td>
<td>50</td>
<td>50</td>
<td>1000</td>
</tr>
<tr>
<td>Full facepiece</td>
<td>1000</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>SCBA full facepiece</td>
<td>10000⁴</td>
<td>10000</td>
<td>10000</td>
</tr>
<tr>
<td>SCBA tight fitting hood</td>
<td>10000⁴</td>
<td>10000</td>
<td></td>
</tr>
</tbody>
</table>

**Assigned Protection Factor (APF)** – the anticipated level of respiratory protection that would be provided by a properly functioning respirator or class of respirators to properly fitted and trained users.

1. APF of 10 with full facepiece respirators equipped with N/R/P 95 or 99 class filters.
2. APF of 50 with a full facepiece equipped with a class 100 filter. Full facepiece with gas/vapour cartridge and/or equipped with a 100 class pre-filter.
3. Manufacturer must demonstrate APF of 1000
4. Must be QNTF – Quantitative fit-test
APPENDIX D: Procedures for Respirator Maintenance

The principal aspects of respirator care include: cleaning/disinfecting, inspection, storage and repair.

A. Cleaning and Disinfecting

1) Remove filters, cartridges, or canisters. Disassemble facepiece. Discard or repair any defective parts.

2) Wash components in warm (43°C maximum) water with mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle brush may be used to remove any dirt.

3) Rinse components thoroughly in clean, warm, preferably running water. Drain.

4) When the cleaner used to clean the respirator does not contain a disinfecting agent, respirator components should be fully immersed for 2 minutes in one of the following:

   a) sodium hypochlorite solution – 1mL of bleach to 1L of water
   b) aqueous solution of iodine – 0.8mL of tincture of iodine to 1L of water
   c) other commercially available cleaners of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

5) Rinse components thoroughly in clean, warm, preferably running water. Drain.

6) Components should be allowed to air dry or be hand dried with a clean, lint free cloth.

7) Reassemble the facepiece, replacing filters, cartridges, and canisters where necessary.

Disinfection (steps 4 &5) is not required for a respirator used by only one worker. For multiple users, however, the respirator must be cleaned and sanitized before it is transferred to another person for use.

The disinfecting solution must not damage the respirator and must not cause skin irritation to the respirator wearer. Proper rinsing of the respirator is important to ensure that this does not happen.
B. Inspecting

a) Check the condition of component parts:
   - Check condition of the facepiece, looking for cracks, cuts, tears, holes and distortion of facepiece;
   - Check head straps to ensure they are properly attached and have elasticity;
   - Check head straps for broken buckles and breaks and tears;
   - Check inhalation and exhalation valves to ensure that they are in place and are not damaged;
   - Check all rubber or flexible parts for cracks and pliability;
   - Check cartridges, canisters, and filters to ensure that they are not spent;
   - Check for cracks or damage to cartridge, filter, or canister;
   - Check the breathing tube (if present) for cracks, holes, missing or loose clamps, and broken or missing end connectors;
   - Check the hood, helmet or, suit (if present) for ripped or torn seams, and for cracks or breaks in the face shield.
   - Check the PAPR assembly (PAPR users only)

b) Check the tightness of connections between cartridges, filters and the respirator facepiece.

c) Check the end-of-service-life indicator (if present).

d) Check the expiration date on the side of the cartridge, filter, or canister (if present).
APPENDIX E: Respirator User Screening Form

University of Toronto
Respirator User Screening Form

Parts A through C of this form to be completed by the supervisor of the respirator user.

A: RESPIRATOR USER INFORMATION

Last Name: ___________________  First Name: ___________________
Personnel Number: ________________
Employing Department: ________________
Job Title: ___________________
Telephone: (___)__________________  Fax: (___)__________________
Supervisor Name: _______________________________________

B: CONDITIONS OF USE

Activities requiring respirator use: __________________________, __________________________, __________________________

Frequency of respirator use:
□ daily  □ weekly  □ monthly  □ yearly  □ uncertain

Exertion level during use:
□ light  □ moderate  □ heavy  □ other

Duration of respirator use per shift:
□ <1/4hr  □ >1/4hr  □ >2hr  □ variable  □ unknown

Temperature during use
□ <0C  □ >0C and <25C  □ > 25C

Conditions pertaining to heat or cold stress:
□ Continuous work >30 min when Humidex > 30C (indoors or outdoors)
□ Continuous work >30 min in hot indoor areas (e.g. steam plant, mechanical rooms)
□ Continuous work >30 min in temperatures <-15C or wind chill <-25C

Atmospheric Pressure during use:
□ reduced  □ normal / ambient  □ increased

Special Work Considerations

Uncontrolled Hostile Environment:
□ Emergency escape  □ Police activity  □ IDLH
□ Oxygen deficiency  □ Confined spaces  □ Hazardous materials (Emerg.)
□ Other _________________________

Other Personal Protective Equipment (PPE):
□ Additional types of PPE equipment required, specify: _________________________
□ Estimated total weight of tools/equipment carried during respirator use: Maximum:___  
Average:___

C: TYPES OF RESPIRATORS TO BE USED (check all that apply)

□ Tight-fitting  □ Non-tight fitting (e.g. hood)  
□ Mouth bit  □ Air-purifying, non-powered  
□ Air-purifying, powered  □ Supplied-air, demand  
□ Supplied-air, continuous flow  □ Supplied-air, pressure demand  
□ SCBA-closed circuit  □ SCBA-open circuit  
□ SCBA – escape  □ SCBA-closed circuit escape  
□ Combination pressure demand/supplied-air with escape  
□ Combination supplied-air with air-purifying elements  
□ Supplied-air suit  
□ Other – specify:  

Signature of the Supervisor:___________________             Date:___________________

Part D of this form to be completed by the respirator user.

D: RESPIRATOR USER’S HEALTH CONDITIONS

(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 other conditions that may affect respirator use? (check YES or NO box only. Do not specify)

□ YES          □ NO

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

(b) Have you had previous difficulty while using a respirator?

□ YES          □ NO

(c) Do you have any concerns about your future ability to use respirator safely?

□ YES          □ NO
Signature of Respirator User:___________________ Date:___________________

Part E of this form to be completed by Occupational Health Nurse.

E: HEALTH CARE PROFESSIONAL PRIMARY ASSESSMENT (if required)

Assessment date:______________
Respirator use permitted?:
□ YES □ NO □ UNCERTAIN
Referred to medical assessment:
□ YES □ NO

Comments:

Reassessment date:______________

Name of Health Care Professional (HCP): _____________________
Title: _______________

Signature of HCP:__________________________

Part F of this form to be completed by Occupational Health Physician.

F: MEDICAL ASSESSMENT (if required)

Assessment Date:______________

□ Class 1. NO restrictions

□ Class 2. Some specific restrictions apply: ______________________________________
________________________________________________________________
________________________________________________________________

□ Class 3. Respirator use is NOT permitted.

Name of Physician:________________________________

Signature of Physician:___________________________