

OCCUPATIONAL AND ENVIRONMENTAL SAFETY & HEALTH OPERATIONAL PROCEDURE

Subject: Respiratory Protection – Personal Protective Equipment

Effective Date: May 2009 (version 1) **Supersedes:** New

Review Date: 3 years or legislation or job changes

Original Signed by: Diane Gantzel, Director, WRHA Occupational and Environmental Safety & Health

1.0 GUIDING PRINCIPLES

- 1.1 In keeping with the Winnipeg Regional Health Authority (WRHA) commitment to providing a safe and healthy workplace as noted in the WRHA 'Workplace Safety and Health' policy (20.10.080), the following Operational Procedure has been developed to ensure this policy is supported.
- 1.2 This operational procedure is also designed to ensure that when followed the minimum requirements of Manitoba Workplace Safety and Health legislation is complied with and where possible exceeded.
- 1.3 As with all matters relating to the Safety and Health of workers the Workplace Safety and Health Committee should be consulted for their input.
- 1.4 All employees will follow the respiratory protection program developed to comply with Manitoba's Workplace Safety & Health Regulation 217/06 Respiratory Protective Equipment 6.15(1) which states; "An employer must ensure that respiratory equipment provided to a worker is (b) selected, used and maintained in accordance with CAN / CSA Z-94.4-02, Selection, Use and Care of Respirators."
- 1.5 Employees requiring accommodations (medical or religious) within the respiratory protection program will provide supportive documentation.
- 1.6 Student participation in clinical placement will be excluded from exposure to clients / patients on airborne precautions if they have not been fit tested for the NIOSH approved N95 Respirator. Fit Testing is the responsibility of the student's educational facility.

2.0 DEFINITIONS

- 2.1 **The Act:** The Workplace Safety and Health Act W210 of Manitoba.

- 2.2 **Committee:** Means a workplace (occupational) safety and health committee established under section 40 of the Workplace Safety and Health Act.
- 2.3 **Employer:**
- 2.3.1 Every person who, by himself or his agent or representative employs or engages one or more workers,
- 2.3.2 and The Crown and every agency of the government.
- 2.4 **Supervisor:** Means a person who has charge of a workplace or authority over a worker.
- 2.5 **Worker:**
- 2.5.1 Any person who is employed by an employer to perform a service whether for gain or reward, or hope of gain or reward or not.
- 2.5.2 Any person engaged by another person to perform services, whether under a contract of employment or not
- 2.5.3 Any person undergoing training or serving an apprenticeship at an education institution or at any other place.
- 2.6 **Director:** means the person administratively responsible for the department or unit. Director includes heads of departments.
- 2.7 **OESH:** means the Occupational and Environmental Safety and Health Unit
- 2.8 **Smoke:** small gas-borne particles , less than 1 micron in size, resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, and other combustible material, or ash, that form a visible plume in the air.
- 2.9 **Particulate:** Particulates, alternatively referred to as particulate matter (PM), [aerosols](#) or fine particles, are tiny particles of solid or liquid suspended in a gas. They range in size from less than 10 [nanometres](#) to more than 100 [micrometres](#) in diameter.
- 2.10 **Risk Assessment:** A process that involves measurement of risk, taking into account severity, frequency and probability, to determine priorities and to enable identification of appropriate level of risk control measures.
- 2.11 **JHA:** Job hazard analysis is the process where the hazards of a job position are identified and compared to the controls and process already in place to reduce risk of injury.
- 2.12 **SWP:** Safe work procedures are written step by step procedures intended to provide instruction to workers on how to complete a task in a safe manner
- 2.13 **NIOSH:** The **National Institute for Occupational Safety and Health** (or **NIOSH**) is the [United States](#) federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. NIOSH is part of the [Centers for Disease Control and Prevention](#) (CDC) within the U.S. [Department of Health and Human Services](#). NIOSH is recognized internationally as the main approval body for respiratory protective equipment and as such is referenced in the CSA standard section 1.2.
- 2.14 **N-95: Type N particulate filter** - NIOSH classification for particulate filter effective against particulate aerosols free of oil; time-use restrictions may apply.
- Note:** *Three filter efficiency levels are tested and certified: 99.97%, 99%, and 95%, referred to as classes 100, 99, and 95, respectively.*
- 2.15 **Respiratory Hazards:** See Appendix A

3.0 OPERATIONAL PROCEDURE

- 3.1 When the hazard cannot be eliminated, or when the process cannot be substituted by a safer process or when effective engineering controls are not reasonable or adequate, or when they are being initiated, and a worker is likely to be exposed to dust, fumes, gas, mist, aerosol, vapours, airborne infections or any contaminant that may be present in amounts that are harmful to the worker, the healthcare facility will provide the worker with suitable NIOSH approved respiratory protection. In addition other administrative controls may be necessary to reduce worker exposure.
- 3.2 The health care facility will provide education for respiratory hazards and training for the use, care and maintenance of respiratory protective equipment.
- 3.3 Health Care Facilities will accommodate workers that are not able to use other forms of respiratory protection due to medical, and /or religious reasons.
- 3.4 Employees, without medical or religious grounds, that refuse to take the necessary hygienic measures required to ensure a proper fit of the respiratory protection equipment provided shall be individually responsible for any additional cost of alternative suitable equipment required including the cost of the equipment, maintenance, repair, training and/or equipment replacement. The employee's facility may choose to incur this additional expense on behalf of the employee at its discretion.
- 3.5 Surgical / Dust masks may be used for nuisance hazards that do not pose any significant risk to worker health and safety. Note that these masks are not considered respirators and as such do not need to be fit tested.
- 3.6 Contractors are required to develop and implement a respiratory protection program for their employees who must enter into or work in areas where exposure to hazardous materials cannot be controlled or avoided. This program must meet Manitoba Regulations and include issuance of respirators, medical evaluations, fit testing and training.

4.0 RESPONSIBILITIES

4.1 Employer

- 4.1.1 Act in accordance with the objects and purposes of the Act by ensuring, so far as is reasonably practicable, the safety, health and welfare at work of all his workers, and complying with the Act and regulations.
- 4.1.2 Ensure that all his workers, and particularly his supervisors, foremen, chargehands or similar persons, are acquainted with any safety or health hazards which may be encountered by the workers in the course of their service, and that workers are familiar with the use of all devices or equipment provided for their protection

4.2 Facility/Program Executive Team

- 4.2.1 Assign responsibilities to staff within the facility/program to ensure the implementation of this operational procedure.

- 4.2.2 Ensure resources (information, training, tool, equipment and time) are available to provide / maintain 4.2.1
- 4.2.3 Support the Operational Procedure throughout the facility/program.

4.3 **Directors/Managers/Supervisors**

- 4.3.1 Ensure compliance with all aspects of the regulations. *The department director is responsible for ensuring that their area of responsibility complies with all aspects of the regulations and this operational procedure.*
- 4.3.2 In consultation with workers utilize the JHA to determine respiratory hazards of the work area including those in emergency situations.
- 4.3.3 If hazards are present, complete a risk assessment to determine risk to workers. Contact OESH for assistance if required.
- 4.3.4 Consult with the Occupational and Environmental Safety & Health Department to select appropriate respiratory protection for airborne hazards if required.
- 4.3.5 Develop SWP for the tasks requiring the use of personal protective equipment.
- 4.3.6 Ensure that employee health screening, fit testing and training (i.e. Fit checks) are completed prior to requiring an employee to use respiratory equipment.
- 4.3.7 Identify respirator user list and ensure users complete the Respirator Medical Screening Form.
- 4.3.8 Maintain departmental records of employees fit tested for respiratory protection, training and medical screening.
- 4.3.9 Ensure adequate respirator protection is available.
- 4.3.10 Enforce the use of proper respiratory protection when required.
- 4.3.11 Ensure respirator equipment maintenance and cleaning procedures are followed.
- 4.3.12 Contact the Human Resource Department for assistance with employee accommodation due to medical or religious requests regarding the use of respiratory personal protective equipment.

4.4 **Worker**

- 4.4.1 Ensure that personal hygiene requirements are followed to ensure the safe fit of the respirator (the growth of facial hair at the site of respirator seal will negatively affect respirator fit and worker protection).
- 4.4.2 Employees shall wear provided personal protective equipment as described in the safe work procedures.
- 4.4.3 Ensure proper procedures are followed during use, maintenance and storage of the respirator equipment.
- 4.4.4 Report any equipment defects or damage to the supervisor.
- 4.4.5 Any concerns with the use of required respiratory protection must be brought to the attention of the manager immediately.

4.5 **Department/Facility/Program Workplace Safety and Health Committees**

- 4.5.1 Consult with the facility/site/program on the development and implementation of this operational procedure.

- 4.5.2 Review and monitor the effectiveness of this operational procedure.
 - 4.5.3 Assist with the identification of respiratory hazards
 - 4.5.4 Recommend control measures base to minimize hazards and reduce risks to workers

 - 4.6 **Occupational and Environmental Safety & Health**
 - 4.6.1 Consult with the facility/site/program on all aspects of this operational procedure.
 - 4.6.2 Will develop and maintain the respiratory program.
 - 4.6.3 Ensure that all aspects of the program, including CSA Standards, are implemented, maintained and reviewed annually or when necessary.
 - 4.6.4 Will review the medical screening form and contact employees with medical conditions that limit there ability wear respiratory equipment.
 - 4.6.5 Will keep all fit testing records.
 - 4.6.6 OESH is responsible to assist facilities in the following:
 - 4.6.6.1 Evaluating tasks for which respiratory protection is thought to be necessary.
 - 4.6.6.2 Determining the degree of hazard posed by the potential exposure
 - 4.6.6.3 Determining whether engineering or administrative controls are feasible
 - 4.6.6.4 Determining which respiratory protection device is to be used for each task.
 - 4.6.6.5 Training personnel in the selection and use of respiratory protective devices
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5.0 TRAINING REQUIREMENTS

- 5.1 The training program must be workplace specific, effective and updated annually or when changes which may affect the procedure are introduced in the workplace.
 - 5.2 All training must be documented. Records must be retained as required by the Workplace Safety and Health Act and Regulations.
 - 5.3 Retraining will be offered if necessary or upon request.
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REFERENCES:

Government of Manitoba. (2002). *The Workplace Safety and Health Act – W210*. Winnipeg: Queen’s Printer. www.safemanitoba.com

Government of Manitoba. (2006). *The Workplace Safety and Health Regulation – 217/2006*. Winnipeg: Queen’s Printer. www.safemanitoba.com

APPENDIX

- Appendix A: Respiratory Protection Selection Guide
- Appendix B: WRHA Respiratory Protection Program

APPENDIX A: Respiratory Protection Selection Guide

Hazards	Health Care Examples	PPE Considerations	Selection
Nuisance Dusts	Storage Area's	Dust Mask (not a respirator)	<p>Before any respirator can be selected, it is essential to know what the hazard is (or suspected) and how much is present. If this cannot be determined accurately, err on the side of caution and select protection based on the worst case scenario. Selection of the right type of respirator for a specific hazard should be made by the industrial hygiene/safety specialist. When such individuals are not on staff, the employer must seek outside consultation for correct selection.</p> <p>It is very important to know the functions and limitations of the respirator you will be using. Selection of respirators must be made according to guidelines of the Canadian Standards Association (CSA) and Manitoba Workplace Safety & Health.</p> <p>Proper respirator selection is a complicated process that does not always follow simple rules. If the wrong type of respirator is selected, workers will not receive adequate protection and the consequences can be serious.</p>
Staff Biological	Protecting Patients	Surgical Mask (not a respirator)	
Particulate Dust	Mold Maintenance Activities Asbestos	N95, P100, Appropriate particulate cartridge with half face / PAPR / Full Face.	
Particulate Fume	Electrocautery Lasers Welding	N95 / Appropriate particulate / chemical cartridge with half face / PAPR / Full Face.	
Particulate Mists	Droplet	N95, P100, Appropriate particulate cartridge with half face / PAPR / Full Face.	
Particulate Airborne Infectious Agents	TB SARS Chicken Pox Measles Mumps	N95	
Chemical Vapors	Solvents Bleach Aldehydes Anesthetic Gasses	Appropriate Chemical Cartridge with half face / full face / PAPR/ SCBA, etc.	
Gasses	Oxygen Nitrous Oxide Nitrogen Helium	Appropriate Chemical Cartridge with half face / full face / PAPR/ SCBA, etc.	
Oxygen Deficiencies	Confined Spaces	SCBA	



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À l'écoute de notre santé



SAFE
HEALTH CARE

S SPOT THE HAZARD
A ASSESS THE RISK
F FIND A SAFER WAY
E EVERYDAY

Respiratory Protection Program

Prepared by: WRHA -Occupational and Environmental Safety & Health
Preparation Date: January 2008

WRHA RESPIRATORY PROTECTION PROGRAM

1.0 MEDICAL EVALUATION

- 1.1. The OESH Physician makes a determination as to whether or not an employee can wear the required respirator without physical or psychological risk. Based on the overall health of the individual and special medical tests (pulmonary function studies, EKG, etc.) as appropriate, the examining physician determines whether or not the individual will be restricted from wearing respiratory protective equipment. If a medical restriction is applied, the employee, his/her supervisor, is formally notified of the restriction.

2.0 SELECTION AND USE OF RESPIRATORY PROTECTIVE DEVICES

2.1. Respirator Use

Respiratory protection is authorized and issued for the following personnel:

- 2.1.1. Workers in areas known to have contaminant levels requiring the use of respiratory protection or in which contaminant levels requiring the use of respiratory protection may be created without warning (e.g., emergency purposes such as hazardous material spill responses).
- 2.1.2. Workers performing operations documented to be health hazardous and those unavoidably required to be in the immediate vicinity where similar levels of contaminants are generated.
- 2.1.3. Workers in suspect areas or performing operations suspected of being health hazardous but for which adequate sampling data has not been obtained.
- 2.1.4. Workers in areas exposed to airborne communicable diseases or new and emerging diseases when mode of transmission is unknown.

2.2. Respirator Use for Biohazards

Respirators for use in areas where biohazards are used or stored must be selected based on a review of the area procedures. OESH in conjunction with IC will conduct a risk assessment and determine the appropriate level of personal protective equipment required.

2.3. Respirator Selection

Selection of the proper respirator(s) to be used in any work area or operation is made only after a determination of the real and/or potential exposure of employees to harmful concentrations of contaminants in the workplace atmosphere. This evaluation will be performed prior to the start of any routine or non-routine tasks requiring respirators. Respiratory protective devices will be selected by facilities with OESH consultation when required. Use the NIOSH Respirator Selection Decision Logic as a guide. The following items will be considered in the selection of respirators:

- Effectiveness of the device against the substance of concern;
- Estimated maximum concentration of the substance in the work area;
- General environment (open shop or confined space, etc.);

- Known limitations of the respiratory protective device;
- Comfort, fit, and worker acceptance; and
- Other contaminants in the environment or potential for oxygen deficiency.

Supervisors shall contact the OESH WHMIS Coordinator at 73312 prior to non-routine work, which may expose workers to hazardous substances or oxygen deficient atmospheres. Examples of work, which may require the use of respirators includes, but are not limited to:

- Asbestos abatement activities
- Abrasive blasting
- Cutting or melting lead or stripping lead-based paints from surfaces
- Welding or burning
- Painting, especially with epoxy or organic solvent coatings
- Using solvents, thinners, or degreasers
- Any work that generates large amounts of dust
- Working in a confined space
- Using formaldehyde to decontaminate a space
- Bioaerosols

A review of the real and/or potential exposures shall be made at least annually to determine if respiratory protection continues to be required, and if so, do the previously chosen respirators still provide adequate protection.

2.4. Types of Respirators

2.4.1. Air-Purifying Respirator

These respirators remove air contaminants by filtering, absorbing, adsorbing, or chemical reaction with the contaminants as they pass through the respirator canister or cartridge. This respirator is to be used only where adequate oxygen (19.5 to 23.5 percent by volume) is available. Air-purifying respirators can be classified as follows:

- 2.4.1.1. Particulate removing respirators, which filter out dusts, fibers, fumes and mists. These respirators may be single-use disposable respirators or respirators with replaceable filters.

NOTE: Surgical masks do not provide protection against air contaminants. They are never to be used in place of an air-purifying respirator. They are for medical use only.

- 2.4.1.2. Gas- and vapour-removing respirators, which remove specific individual contaminants or a combination of contaminants by absorption, adsorption or by chemical reaction. Gas masks and chemical-cartridge respirators are examples of gas- and vapour-removing respirators.

- 2.4.1.3. Combination particulate/gas- and vapour-removing respirators, combining the respirator characteristics of both kinds of air-purifying respirators.

2.4.2. Supplied-Air Respirators

These respirators provide breathing air independent of the environment. Such respirators are to be used when the contaminant has insufficient odour, taste or irritating warning properties, or when the contaminant is of such high concentration or toxicity that an air-purifying respirator is inadequate. Supplied- air respirators, also called airline respirators, are classified as follows:

2.4.2.1. Demand

This respirator supplies air to the user on demand (inhalation) that creates a negative pressure within the face piece. Leakage into the face piece may occur if there is a poor seal between the respirator and the user's face.

2.4.3. Pressure-Demand

This respirator maintains a continuous positive pressure within the face piece, thus preventing leakage into the face piece.

2.4.4. Continuous Flow

This respirator maintains a continuous flow of air through the face piece and prevents leakage into the face piece.

2.4.5. Self-Contained Breathing Apparatus (SCBA)

This type of respirator allows the user complete independence from a fixed source of air and offers the greatest degree of protection but is also the most complex. Training and practice in its use and maintenance is essential. This type of device will be used in emergency situations only.

2.5. Identification of Respirator Cartridges and Gas Mask Canisters

Respirator cartridges and canisters are designed to protect against individual or a combination of potentially hazardous atmospheric contaminants, and are specifically labelled and colour-coded to indicate the type and nature of protection they provide.

The NIOSH approval label on the respirator will also specify the maximum concentration of contaminant(s) for which the cartridge or canister is approved.

2.6. Warning Signs of Respirator Failure

2.6.1. Particulate Air-Purifying

When breathing difficulty is encountered with a filter respirator (due to partial clogging with increased resistance), the filter(s) must be replaced. Disposable filter respirators must be discarded.

2.6.2. Gas or Vapour Air-Purifying

If, when using a gas or vapour respirator (chemical cartridge or canister), any of the warning properties (e.g., odour, taste, eye irritation, or respiratory irritation) occur, promptly leave the area and check the following:

- Proper face seal
- Damaged or missing respirator parts
- Saturated or inappropriate cartridge or canister

If no discrepancies are observed, replace the cartridge or canister. If any of the warning properties appear again, the concentration of the contaminants may have exceeded the cartridge or canister design specification. When this occurs an airline respirator or SCBA is required.

2.7. Service Life of Air-Purifying Respirator Canisters and Cartridges

The canisters or cartridges of air-purifying respirators are intended to be used until filter resistance precludes further use, or the chemical sorbent is expended as signified by a specific warning property, e.g., odour, taste, etc. New canisters, cartridges or filters shall always be provided when a respirator is reissued. When in doubt about the previous use of the respirator, obtain a replacement canister or cartridge.

2.8. Supplied Air Respirator

When using an airlines respirator, leave the area immediately when the compressor failure alarm is activated or if an air pressure drop is sensed. When using an SCBA leave the area as soon as the air pressure alarm is activated.

3.0 RESPIRATOR TRAINING

The facility provides training, in consultation with OESH, prior to assignment of personnel to work requiring the use of respirators. Retraining is given on a regular basis determined by OESH thereafter and only upon successful completion of the medical evaluation.

3.1. The training program will include the following:

- 3.1.1.** Nature and degree of respiratory hazard.
- 3.1.2.** Respirator selection, based on the hazard and respirator capabilities and limitations
- 3.1.3.** Donning procedures and fit tests including hand's-on practice
- 3.1.4.** Care of the respirator, e.g., need for cleaning, maintenance, storage, and/or replacement
- 3.1.5.** Use and limitations of respirator

3.2. Respirator training will be properly documented (Appendix A) and will include the type and model of respirator for which the individual has been trained and fit-tested.

4.0 RESPIRATOR FIT TESTING

4.1. A fit test shall be used to determine the ability of each individual respirator wearer to obtain a satisfactory fit with any air-purifying respirator. Either quantitative or qualitative fit tests will be performed. Personnel must successfully pass the fit test before being issued a respirator.

4.2. No WRHA employee is permitted to wear a negative-pressure respirator in a work situation until he or she has demonstrated that an acceptable fit can be obtained. Respirator fitting is conducted initially upon assignment to a task requiring use of a respirator. Refitting is conducted as determined by OESH thereafter upon successful completion of the respirator training.

4.3. OESH will conduct fit testing or provide train-the-trainer training to facility designates. The fit testing results will be the determining factor in selecting the type, model, and size of negative-pressure respirator for use by each individual respirator wearer.

4.4. Each time a respirator is donned, the user will perform positive and negative pressure fit checks. These checks are not a substitute for fit testing. Respirator users must be properly trained in the performance of these checks and understand their limitations. Specifics of fit-checks vary according to each design/manufacturer.

4.4.1. Negative Pressure Check

Procedure: Close off the inlet opening of the respirator's canister(s), cartridge(s), or filter(s) with the palm of the hand, or squeeze the breathing air tube or block its inlet so that it will not allow the passage of air. Inhale gently and hold for at least 10 seconds. If the face piece collapses slightly and no inward leakage of air into the face piece is detected, it can be reasonably assumed that the respirator has been properly positioned and the exhalation valve and face piece are not leaking.

4.4.2. Positive Pressure Check

Procedure: Close off the exhalation valve or the breathing tube with the palm of the hand. Exhale gently. If the respirator has been properly positioned, a slight positive pressure will build up inside the face piece without detection of any outward air leak between the sealing surface of the face piece and the face.

4.5. Qualitative Fit Testing

This test checks the subject's response to a chemical introduced outside the respirator face piece. This response is either voluntary or involuntary depending on the chemical used. Several methods may be used. The two most common are the irritant smoke test, and the odorous vapour test.

4.5.1. Irritant Smoke

The irritant smoke test is an involuntary response test. Air purifying respirators must be equipped with a high efficiency particulate air (HEPA) filter for this test. An irritant smoke is directed from a smoke tube toward the respirator. If the test subject does not respond to the irritant smoke, a satisfactory fit is assumed to be achieved. Any response to the smoke indicates an unsatisfactory fit.

The irritant smoke is an irritant to the eyes, skin, and mucous membranes. It should not be introduced directly onto the skin. The test subject must

keep his or her eyes closed during the testing if a full-face piece mask is not used.

4.5.2. Odorous Vapour

The odorous vapour test is a voluntary response test. It relies on the subject's ability to detect an odorous chemical while wearing the respirator. If the test subject is unable to smell the chemical, than a satisfactory fit is assumed to be achieved. If the subject smells the chemical, the fit is unsatisfactory.

If the subject cannot smell the chemical, the respirator will be momentarily pulled away from the subject's face. If the subject is then able to smell the chemical, a satisfactory fit is assumed. If the subject cannot smell the chemical with the respirator pulled away from the face, this test is inappropriate for this subject, and a different test will be used.

This test is limited by the wide variation of odour thresholds among individuals and the possibility of olfactory fatigue. Since it is a voluntary response test it depends upon an honest response.

4.5.3. Bitrex/ Saccharin

For the NIOSH approved n95 mask, a taste test can be used. The subject is placed under a hood and told to breathe through their mouth until they taste the test substance, establishing a sensitivity. They then do 6 exercises (normal breathing, deep breathing, turning head from side to side, nodding head up and down, reading or counting aloud and normal breathing again.) The subject should not taste the test substance if the mask is sealed correctly.

4.6. Quantitative Fit Testing

Quantitative fit testing, using the PortaCount Plus fit test system, is generally performed on both full-face and half-face negative pressure respirators. Fit factors are determined by comparing the particle concentration outside the respirator with the concentration inside the respirator face piece. An acceptable fit is achieved when the respirator wearer successfully completes a series of programmed exercises (normal breathing, deep breathing, moving head up and down, moving head side to side, reading, bending over and standing up, and normal breathing) with a fit factor of 100 or more.

4.7. Special Problems

4.7.1. Facial Hair

No attempt is made to fit a respirator on an employee who has facial hair which comes between the sealing periphery of the face piece and the face, or if facial hair interferes with normal functioning of the exhalation valve of the respirator.

4.7.2. Glasses and Eye/Face Protective Devices

Proper fitting of a respiratory protective device face piece for individuals wearing corrective eyeglasses or goggles may not be established if temple

bars or straps extend through the sealing edge of the face piece. If eyeglasses, goggles, face shield or welding helmet must be worn with a respirator, they must be worn so as not to adversely affect the seal of the face piece. If a full-face piece respirator is used, special prescription glasses inserts are available if needed.

4.8. Respirator User Cards

Respirator User Cards will be issued by OESH to workers who have been trained, fitted, and evaluated to use respirators. A Respirator User Card will include:

- Name of the worker.
- Test Date
- The manufacturer, style(s), model(s), and size(s) of respirator(s) that the cardholder was issued.
- The name of the fit tester
- Expiration date of card.

4.9. Record keeping

Respirator fit testing shall be documented and shall include the type of respirator, brand name and model, method of test and test results, test date and the name of the instructor/tester. A database will be kept by OESH. (See Appendix A).

5.0 MAINTENANCE AND ISSUANCE OF RESPIRATORS

5.1. Maintenance

The maintenance of respiratory protective devices involves a thorough visual inspection for cleanliness and defects (i.e., cracking rubber, deterioration of straps, defective exhalation and inhalation valves, broken or cracked lenses, etc.). Worn or deteriorated parts will be replaced prior to reissue. No respirator with a known defect is reissued for use. No attempt is made to replace components, make adjustments or make repairs on any respirator beyond those recommended by the manufacturer. Under no circumstances will parts be substituted, as such substitutions will invalidate the approval of the respirator. Either the manufacturer or a qualified trained technician will conduct any repair to reducing or admission valves, regulators, or alarms.

5.2. Cleaning of Respirators

All respirators in routine use shall be cleaned and sanitized on a periodic basis. Respirators used non-routinely shall be cleaned and sanitized after each use and filters and cartridges replaced. Routinely used respirators are to be maintained individually by the respirator wearer. Replacement cartridges and filters are to be obtained by contacting Purchasing.

Cleaning and disinfection of respirators must be done frequently to ensure that skin-penetrating and dermatitis-causing contaminants are removed from the respirator surface. Respirators maintained for emergency use or the user must clean those used by more than one person after each use.

The following procedure is recommended for cleaning and disinfecting respirators:

- 5.2.1. Remove and discard all used filters, cartridges, or canisters.
- 5.2.2. Wash face piece and breathing tube in a cleaner-disinfectant solution. A hand brush may be used to remove dirt. Solvents, which can affect rubber and other parts, shall not be used.
- 5.2.3. Rinse completely in clean, warm water.
- 5.2.4. Air dry in a clean area in such a way as to prevent distortion.
- 5.2.5. Clean other respirator parts as recommended by the manufacturer.
- 5.2.6. Inspect valves, head straps, and other parts to ensure proper working condition.
- 5.2.7. Reassemble respirator and replace any defective parts.
- 5.2.8. Place in a clean, dry plastic bag or other suitable container for storage after each cleaning and disinfection.

5.3. Issuance of Respirators

Respiratory protective equipment shall not be ordered, purchased, or issued to personnel unless the respirator wearer has received respirator training and a fit test. New employees who require respiratory protective equipment, must be placed into the respirator program before being issued equipment.

At the time of issue the appropriate canister is determined, based on the user's needs, and is issued with the appropriate face piece. In addition, disposable respirators with filter ratings N-95 and N-100 ratings are available for use under appropriate conditions.

5.4. Storage

After inspection, cleaning, and any necessary minor repairs, store respirators to protect against sunlight, heat, extreme cold, excessive moisture, damaging chemicals or other contaminants. Respirators placed at stations and work areas for emergency use shall be stored in compartments built for that purpose, shall be quickly accessible at all times and will be clearly marked. Routinely used respirators, such as half-mask or full-face air-purifying respirators, shall be placed in sealable plastic bags. Respirators may be stored in such places as lockers or toolboxes only if they are first placed in carrying cases or cartons. Respirators shall be packed or stored so that the face piece and exhalation valves will rest in a normal position and not be crushed. Emergency use respirators shall be stored in a sturdy compartment that is quickly accessible and clearly marked.

6.0 PROGRAM SURVEILLANCE

The evaluation of the Respirator Program will include investigating user acceptance of respirators, inspecting respirator program operation, and appraising protection provided by the respirator. The findings of the respirator program evaluation will be documented, and this documentation will list plans to correct faults in the program and set target dates for the implementation of the plans. These evaluations will be conducted as determined by WRHA OESH.

7.0 RECORDKEEPING

The following records shall be developed and maintained for the WRHA Respirator Program:

Record	Location
Medical Evaluations	OESH
Training Records	OESH
Hazard Evaluations (Air sampling results, surveys, respirator selection records)	OESH
Biohazard Risk Assessments	OESH
Fit Test Records	OESH
Program Evaluations	OESH

8.0 REFERENCES

American National Standards Institute: American National Standard Practices for Respiratory Protection, ANSI Z88.2, New York, NY: American National Standards Institute, 1989.

American National Standards Institute: American National Standard For Respiratory Protection - Respirator Use - Physical Qualifications for Personnel, ANSI Z88.6, New York, NY: American National Standards Institute, 1984.

Compressed Gas Association: Commodity Specification for Air. (ANSI/CGA G-7.1), Arlington, VA: Compressed Gas Association, Inc., 1989.

OSHA Standard, 29 CFR 1910.134, "Respiratory Protection".

Table 4-1 Respirator Selection

HAZARD	RESPIRATOR TYPE
Asbestos	Half-mask, air-purifying respirator with HEPA filters Full-face, air-purifying respirator with HEPA filters Full-face, powered air-purifying respirator with HEPA filters
Epoxy- or Oil-based Paints	Half-face, air-purifying respirators with organic vapour filters Full-face powered air-purifying respirator with organic vapour filters
Lead-based Paint removal	Half-face, air-purifying respirators with HEPA filters Full-face, air-purifying respirators with HEPA filters Full-face, powered air-purifying respirators with HEPA filters
Use of Pesticides, Herbicides, and Rodenticides	Full-face, air-purifying respirator with combination particulate and pesticide cartridges Full-face, powered air-purifying respirator with combination particulate and pesticide cartridges
Use of Formaldehyde	Full-face, air-purifying respirator with organic vapour or specific formaldehyde cartridges Full-face, powered air-purifying respirator with organic vapour or specific formaldehyde cartridges Type C supplied air respirator with pressure- demand mode
Airborne communicable disease i.e. TB or new and emerging disease	NIOSH approved N95 particle filtration respirator

APPENDIX A – WRHA Respiratory Fit test Log

WRHA RESPIRATOR FIT TEST LOG																
Name of worker:	Employee No:															
Site / Facility:																
Job Classification / Position:	Date:															
Department / Unit	Local Phone No.:															
Check Yes or No box <u>only</u>. No details needed.																
<p>1. Health Assessment:</p> <p>a. Do you experience any of the following to the degree that may interfere with respirator use? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Asthma</td> <td style="width: 33%;">Silicosis</td> <td style="width: 33%;">Shortness of breath</td> </tr> <tr> <td>Emphysema</td> <td>Lung Cancer</td> <td>Chronic coughing</td> </tr> <tr> <td>Claustrophobia</td> <td>Heart Disease</td> <td>Facial skin dermatitis</td> </tr> <tr> <td>Chronic bronchitis</td> <td>Stroke</td> <td>Tuberculosis</td> </tr> <tr> <td>Angina</td> <td colspan="2">Allergic reactions that interfere with breathing</td> </tr> </table> <p>b. Have you had previous difficulty while using a respirator? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>c. Do you have any concerns regarding your ability to wear a respirator? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If you responded Yes to (a) or (b) or (c) further assessment and signed release by an Occupational Health Nurse in OESH or OESH's physician / family physician is required prior to fit testing.</i></p> <p><i>Please call the Occupational and Environmental Safety & Health Unit for review by an Occupational Health Nurse.</i></p>		Asthma	Silicosis	Shortness of breath	Emphysema	Lung Cancer	Chronic coughing	Claustrophobia	Heart Disease	Facial skin dermatitis	Chronic bronchitis	Stroke	Tuberculosis	Angina	Allergic reactions that interfere with breathing	
Asthma	Silicosis	Shortness of breath														
Emphysema	Lung Cancer	Chronic coughing														
Claustrophobia	Heart Disease	Facial skin dermatitis														
Chronic bronchitis	Stroke	Tuberculosis														
Angina	Allergic reactions that interfere with breathing															
<p>2. Do you have any of the following? Eyeglasses/dentures/facial hair/stubble <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If yes to any of the above, discuss how the respirator seal will be affected:</i></p> <ul style="list-style-type: none"> • Eyeglasses may modify how the respirator seals against the face, in turn decreasing likelihood of obtaining an adequate fit. • Dentures that are dislodged can alter face shape and, in turn, affect the seal. • Workers must be clean shaven where the respirator seals with the face. 																
<p>3. Perform sensitivity test Test agent used: <input type="checkbox"/> Bitrex <input type="checkbox"/> Saccharin _____ Number of squeezes:</p>																
<p>4. Points discussed with workers (refer to Introduction notes):</p> <ul style="list-style-type: none"> ▫ N95 respirator versus surgical mask ▫ Respirator limitations ▫ Inspecting respirator condition ▫ Re-use ▫ Donning and doffing respirator ▫ Where to obtain replacement respirators ▫ When another fit test is required every 2 years or when weight gain/loss, broken facial bones, different respirator model to be used 																
<p>5. Check when completed successfully:</p> <p><input type="checkbox"/> Correct positioning of respirator and strap adjustments</p> <p><input type="checkbox"/> Negative or Positive-pressure seal check</p>																

WRHA FIT TEST PROCEDURE

Fit Test Exercises (recall # squeezes needed in sensitivity test):

Step	Score	Pass/Fail
Normal breathing		
Deep breathing		
Turning head side to side (normal breathing)		
Nodding head up and down (normal breathing)		
Read out loud slowly		
Bending Over		
Normal breathing		

Overall: _____

Respirator(s) fit tested by worker:

Continue to retest using different respirators until a successful test is achieved. (See list for details of Manufacturer, make, model etc.)

1. Make/model/size _____ / _____ / _____ P F
2. Make/model/size _____ / _____ / _____ P F
3. Make/model/size _____ / _____ / _____ P F

Remind employee: *Only the respirator for which the employee was successfully fit-tested is to be worn when required for work activities.*

Fit test date:

Comments:

I, the undersigned have been fit tested and counselled in the use of the above-noted respirator.

Employee signature:

Date:

Fit tester signature: