CITY OF HAMILTON - CORPORATE SAFETY PROCEDURE

DEVELOPED BY: CORPORATE WORKPLACE SAFETY SECTION Procedure # COH-RQ-WI-026
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PROPER USE, CARE AND MAINTENANCE OF RESPIRATORS

I. PURPOSE:

To outline a procedure to protect workers from harmful exposures caused by breathing air contaminated with gases, fumes or vapours. This protection is best accomplished through accepted engineering control measures, including general or local ventilation, enclosing or isolating the hazard and by substituting less hazardous materials.

However, when engineering controls are not feasible, or while they are being instituted, appropriate respiratory protection may be required.

II. SCOPE AND RESPONSIBILITY:

Applies to all City of Hamilton workers and work locations where respiratory protection may be required.

Also refer to procedure – PPE (COH-RQ-WI-010)

Corporate Workplace Safety Section:

1. To assist departments with establishing protocols to ensure that all selected respiratory protection meets legislative standards including CSA Z94.4-02 and CAN/CSA-Z180.1 (or equivalent).

2. Provide technical assistance to determining the need for respiratory protection.

3. Provide technical assistance in the selection of appropriate respiratory protection.
1. Ensure that appropriate respiratory protection is issued.

2. Ensure that employees wear respirators when required.

3. Ensure all workers who use respirators are properly trained, assessed and fit tested prior to using a respirator for the first time.

   Assessment shall be conducted through a “health surveillance program” which shall ensure that documentation is completed that confirms an individual is free from any condition that may preclude him or her from using a respirator. This documentation will be maintained in the division of Human Resources Department designated to maintain such medical records.

   Fit testing shall be repeated on a two year cycle, as a minimum, or more frequently should a different type/style of respirators be introduced into the workplace, or when a worker advises that his/her personal situation has changed in a manner that may affect the achievement of a proper seal.

4. Ensure that a competent person is designated to co-ordinate the Respiratory Protection Program within the Department.

III. DEFINITIONS:

There are generally four types of respirators provided by the City of Hamilton:

1) Air purifying respirators – Clean contaminated air by passing it through a filter/cartridge. (Half or full face-piece)

2) Self-contained breathing apparatus (S.C.B.A.) – Clean air is supplied from a cylinder (tank) carried by the worker, through an airline to the mask.

3) Supplied air respirators – Clean air is supplied from an outside source (Tank) through an airline to the mask.

4) Disposable half-face respirators. (Example: N95)

ALL WORKERS REQUIRED TO WORK IN ANY PROCESS OR WORK AREA WHICH AS A RESULT OF AN HYGIENE ASSESSMENT IS DESIGNATED AS A POTENTIALLY HAZARDOUS ENVIRONMENT AND WHERE EFFECTIVE ENGINEERING OR ADMINISTRATIVE CONTROLS CANNOT BE IMPLEMENTED, SHALL WEAR APPROVED RESPIRATORS PROVIDED AND ENSURE A PROPER SEAL FOR THEIR PROTECTION BY BEING CLEAN SHAVEN IN THE AREA OF THE SEAL.
IV. PROCEDURE:

The departmental Program Coordinator shall ensure that:

1. The full scope of the respiratory training program is implemented within the department.
2. The program is properly administered.
3. The required training is provided to all workers and supervisors.

The Worker shall ensure that:

1) They participate in the required assessment and fit testing standard and use the employer supplied respiratory protection in accordance with the training provided.

2) They clean, disinfect, inspect, and store the supplied respiratory protection in accordance with the manufacturer’s instructions.

3) They report all respiratory protection problems to the immediate supervisor.

The following procedure covers all general requirements for respirators. For complete regulatory compliance, reference to CSA standard Z94.4-02 is required.

TRAINING:

Every worker who may be required to wear a respirator must attend an approved training program. Supervisors shall also participate in the training. The training program must include the following components:

A. Description of the respirators.
B. Intended use and limitations of the respirator
C. Proper wearing, adjustment
D. Completion of a qualitative fitting test or quantitative fitting test as may be required.
E. Cleaning and storage methods
F. Inspection and maintenance procedures

Training shall be repeated at least annually to ensure that employees remain familiar with the proper use of respiratory protection. The “Respiratory Training Program” shall be evaluated at least annually by the Program Co-ordinator. The evaluation will be in consultation with the appropriate Joint Health and Safety Committee.
RESPIRATOR SELECTION:

Respirators shall be selected by individual departments, in consultation with the Department Safety Specialist and/or the Corporate Workplace Safety Section. The selection process will be based on the physical, chemical and physiological properties of the air contaminant and on the concentration likely to be encountered. The quality of fit and the nature of the work being done also affect the choice of respirators. All selected respirators shall meet all appropriate government approvals and standards including CSA Z94.4-02 or equivalent.

DISTRIBUTION:

Respirators are issued to trained or qualified individuals only. Each respirator shall be identified in a way that does not interfere with its performance or create misinformation or confusion to the worker.

INSPECTION AND MAINTENANCE:

Respirators must be properly maintained to retain their original effectiveness through regular inspection, repair, cleaning, and proper storage.

INSPECTION:

1. All respirators shall be inspected routinely by the user before and after each use and after cleaning to check condition of face piece, head bands, valves and hoses as well as canister, filter or cartridge fit.

2. Respirators maintained for emergency use shall be tagged, noting the date of inspection and the initials of the person doing the inspection. A log indicating inspection dates shall be kept. Respirators, which do not pass inspection are replaced or repaired immediately. Repair of the respirator by the user is limited to changing canister, cartridge filters, and head straps. All other replacements or repairs are to be performed by, an experienced, qualified person, with parts designed for the respirator. No attempt is made to replace components or make adjustments, modifications or repairs beyond the manufacturer’s recommendations.

CLEANING:

Individually assigned respirators are cleaned and disinfected frequently to ensure that proper protection is provided for the wearer. Respirators not individually assigned and those for emergency use are cleaned and disinfected after each use.
The following procedure is used for cleaning and disinfecting respirators:

A. Filters, cartridges, or canisters are removed before washing the respirator and discarded as necessary.
B. Respirators are washed in a cleaning/disinfecting solution or as per manufacturing recommendation, rinsed in clean water, and allowed to dry in a clean area. A brush is used to scrub the respirator to remove any adhering particulate.

STORAGE:

After inspection, cleaning and necessary repairs, respirators must be stored in order to adequately protect them from dust, sunlight, heat, extreme heat, extreme cold, excessive moisture, and damaging chemicals.

It is recommended that respirators be stored in plastic bags or the original cartons and placed in specially designated cabinets or lockers with other protective equipment. Under most conditions, it is not advisable to store a respirator in a toolbox or out in the open. Cartridges or canisters and mask equipped with these components shall be sealed in a plastic bag to preserve their effectiveness.

Improper storage will result in reduced service life, added cost and may render the equipment ineffective.

SCBA and air tanks shall be maintained according to the required standard CAN/CSA-Z180.1-00. Stored breathing air, if not changed regularly, may become stale, and if stored wet, may lead to loss of oxygen caused by metal oxidation in steel receivers and cylinders or corrosion in alloy cylinders. Prior to using an SCBA air cylinder that has not been used in any 12-month period, the air shall be discarded by slowly depressurizing the cylinder to the atmosphere and refilling it with compressed breathing air meeting the requirements of CSA Standard CAN/CSA-Z180.1.

NOTE:
Workers and their supervisors shall be held accountable for violations of health and safety rules, regulations, and procedures. Disciplinary action, where necessary, will be dictated by the City of Hamilton disciplinary procedure and will be based on the merits of the specific case.

Prior to disciplinary measures being taken, management is advised to consult with Labour Relations.