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| SOG# 502-1 | Standard Operating Guideline | Safety |
|  | Cumberland Road Fire Department Inc. Respiratory Protection Program | Approved By Steven W. Parrish, Fire Chief |
| | | Effective Date Revised Date August 9, 1991 August 17, 2018 |

Purpose:

This standard establishes procedures for the Cumberland Road Fire Department Respiratory Protection Program. The standard and procedures are designed to prevent excessive exposure to dusts, fumes, mists, gases, smokes, sprays and vapors.

Policy:

Cumberland Road Fire Department recognizes that the NC Occupational Safety and Health Administration have set Permissible Exposure Limits (PEL) for airborne toxic materials. If members/employee’s exposure to these substances exceeds these limits, the law requires that feasible engineering controls and/or administrative controls be installed or instituted to reduce this exposure to acceptable levels. If these controls do not prove feasible, or while they are being installed or instituted, the employer is required to provide appropriate respiratory protection for the members/employee’s.

Standard:


The Cumberland Road Fire Department, in accordance with NC OSHA 1910.134 permits only the use of open circuit positive pressure breathing apparatus. All positive pressure breathing apparatus shall meet the requirements of NFPA 1981, the standard for open circuit positive pressure breathing apparatus.

The basic elements of our respiratory protection program

- Identifying the respiratory hazard
- Evaluating the hazard
- Selecting the proper respirator
- Atmosphere fit testing the respirator
- Cleaning and disinfecting
- Storing properly
- Inspecting and repairing
- Restricting use
- Training
- Administering the program
- Additional Requirements

Identifying the respiratory hazard

The Cumberland Road Fire Department recognizes that unknown varieties and quantities of toxic materials and combustion byproducts encountered in firefighting and hazardous materials response do not allow the selection of different respiratory equipment to fit different exposures.

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The Cumberland Road Fire Department therefore permits only the use of self-contained breathing apparatus (SCBA) that is certified in accordance with NIOSH/MSHA and ANSI Z.88.2-1969 and meets the requirements of NFPA 1981.

Self-Contained Breathing Apparatus (SBCA) Usage


A member/employee encountering any of the following conditions shall utilize the SCBA provided. To utilize shall mean that the SCBA is donned and is providing the sole source of breathing air to the wearer in accordance with the recommendation by the manufacturer. The SCBA shall not be removed until these conditions no longer exist or until the employee is in a safe atmosphere.

- Hazardous atmospheres
- Atmospheres suspected of being hazardous
- Atmospheres that may rapidly become hazardous
- Carbon monoxide levels above 35 ppm

To further define "Hazardous Atmosphere", it shall mean any atmosphere that may be oxygen deficient or that contains a toxic or disease producing contaminant. A hazardous atmosphere may or may not be immediately dangerous to life and health.

SCBA must be worn in the above conditions unless it can be safely established by monitoring or testing that the atmosphere is not oxygen deficient or contaminated.

Cumberland Road Fire Department personnel shall wear the SCBA according to manufacturer's requirements.

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Cumberland Road Fire Department personnel wearing SCBA shall operate in teams of two or more. Communication should be maintained between each team member through visual, audible, physical, safety rope, electronic or any other means to stay in contact. Team members should enter and exit together and stay close to one another to provide emergency assistance if needed.

During a Hazardous Materials response requiring SCBA usage, at least one person shall be assigned to remain outside the area where SCBA is in use. This person is responsible for maintaining constant knowledge of the number and identity of personnel using SCBA, their location and function and their time of entry and exit.

Sufficient SCBA shall be available at the scene to have one unit for each member who may be exposed to respiratory hazards.

Sufficient reserve air supply shall be supplied by use of spare bottles or by on-scene refill capabilities or a combination. A service area to change out air bottles on individual SCBAs will be set up by the pump operator or support personnel. Spare bottles will be brought to the designated change out area. The mobile air refilling unit will be set up in a designated location away from the smoke-filled area.


SCBA shall not be removed until the atmosphere is no longer hazardous. The removal of SCBA shall be determined by the Incident Commander. This determination shall be made by testing the quality and content of the atmosphere. Re-donning SCBA may be required as circumstances dictate.

Selecting the proper respirator

Selection of the respiratory protection for departmental use shall be made in accordance with current OSHA standards, NIOSH recommendations and NFPA.

Where respiratory protection is required, the Cumberland Road Fire Department shall provide at no cost to the members/employee the appropriate type SCBA and an exclusive use face piece. However, in specific circumstances, other types of respirator may be permitted for use.

Respiratory protection devices vary in design, protection capabilities and application. The selection for use shall be based on assessment of the inhalation hazard and an understanding of the specific use and limitations of the equipment.

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Design Variations

Supplied Air: Delivers breathing air through a supply hose connected to the wearer's face piece. Use only for high concentration of contaminant, where the atmosphere may be dangerous to life or health. Types of supplied air respirators are airline and hose mask.

SCBA: Provides complete breathing protection for various periods of time. This time is based on the amount of breathing air or oxygen supplied and the breathing demands of the wearer.

Atmosphere fit testing the respirator

It is essential that Cumberland Road Fire Department personnel are properly fitted for assigned respiratory protection equipment. Atmosphere fit testing shall be conducted annually to ensure an adequate face to mask seal. In addition to the annual test, an employee whose facial features has been altered by a substantial increase or decrease in body weight will require an additional atmosphere test.

The Cumberland Road Fire Department shall ensure an adequate number of technicians trained and qualified to perform the fit testing.


Records for member/employee fit testing approval shall be maintained in the member/employees personnel file.

In accordance with 29 CFR 1910.134, facial hair, such as a mustache, sideburns or a beard that passes between the skin and the sealing surface of the respirator face piece shall not be permitted. The final determination as to the acceptable length of facial hair growth will be based on the employee's ability to pass a user seal test and adherence to the Cumberland Road Fire Departments Appearance SOG. Other items such as eyeglasses and protective hoods shall not be allowed to extend between the sealing surface of the face piece and the face.

The Department's contracted healthcare provider will send to the department head a list of employees who have been approved to wear a respirator after their pulmonary function tests.

Cleaning and Disinfecting

Where respirators are used routinely, they shall be cleaned and disinfected daily. Where they are used occasionally, periodic cleaning and disinfecting is appropriate. Responsibility for cleaning and disinfecting the respirator is assigned to the properly trained individual who wears the respirator.

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Respirators used for emergency use only and respirators that are worn by more than one user shall be cleaned and disinfected after each use.

Cleaning, disinfecting and decontamination methods shall conform to the manufacture’s recommendations.

Storage

OSHA requires respirators to "be stored in a convenient, clean, and sanitary location." The purpose of good respirator storage is to ensure that the respirator will function properly when used.

Emergency use respirators should be stored where they are easily accessible.

Inspection and Repairing

Inspection Schedule

1. All respiratory protective equipment must be inspected at the beginning of each shift and after each use.
2. Self-contained breathing apparatus shall be inspected on the first day of each month.


Repair

Continued usage of respirator protective equipment may require periodic repair or replacement of defective parts. Such repair and replacement shall be done by qualified personnel. Replacement parts of respirators protective equipment must be those of the manufacturer of the equipment. Substitution will invalidate the approval of the respirator. All SCBA repair request shall be completed on the Aladtec “SCBA Repair Request” form.

C. Record Keeping

The following records shall be maintained in reference to the Cumberland Road Fire Department Respiratory Protection Program.

- All work or repair orders shall.
- Compressed air quality analysis.
- Individual training records shall be recorded in Firehouse RMS.
- Maintenance records.
- Quantitative fit test records.

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- Inventory records.

Training

It shall be the standard of the Cumberland Road Fire Department to provide all members/employees, prior to actual use, training in the operation, care and maintenance of the specific type of breathing apparatus available to the employee.

It shall be the standard of the Cumberland Road Fire Department to document on a quarterly schedule a SCBA drill for each member of the department required to use the equipment.

These drills will be conducted by the Training Staff using the "SCBA performance evaluation" form.

Training records shall be maintained in Firehouse RMS.

There will be a regular inspection and evaluation by the Training Division to determine the continued effectiveness of the Respiratory Protection Program.

Additional requirements

Corrective lenses that have temple bars or straps should not be used when a full-face piece respirator is worn since they could pass through the face piece-to face seal. The Cumberland Road Fire Department provides frames to be used with the face piece. The lenses are to be provided by the member/employee.


Contact Lenses

OSHA's current standard on respiratory protection allows the use of contact lens with respirators where the wearer has successfully worn such lenses before.

All compressed breathing gas cylinders must be marked and meet U.S. Department of Transportation requirements for interstate shipment as required by MSHA/NIOSH 49 CFR Part 178.

All breathing air must meet or exceed the requirements of Grade D breathing air as specified in the Compressed Gas Association Pamphlet G-7.1- 1966.

SCBA's placed at stations, work areas and on vehicles for emergency use shall be securely mounted and quickly accessible at all times.

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Responsibility

It shall be the responsibility of each member of the department and supervisors to ensure that the provisions of this standard are followed.