Purpose: To establish procedures/policy for use of respiratory protection by Cumru Township Fire Department Fire personnel in compliance with NFPA 1500 and 29 CFR 1910.134.

Administration: The Fire Chief, Assistant Fire Chief and Deputy Chief of Health and Safety will have primary responsibility for administration of this policy within the scope of their job descriptions.

Policy: All Cumru Township Fire Department personnel shall make use of suitable and mission-appropriate positive pressure self-contained breathing apparatus (SCBA) or supplied air respirator (SAR) when entering an IDLH atmosphere. Use of other respiratory protection equipment (e.g., air purifying respirators, etc.) used for specialized applications such as hazardous materials Tactics and procedures followed when personnel are engaged in such activities shall be compliant with NFPA 1500 standard and 29 CFR 1910.134 regulations, as outlined below.

Definitions:

Immediately dangerous to life or health (IDLH) atmosphere: an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Positive pressure self-contained breathing apparatus (SCBA): atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user and in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Supplied-air respirator (SAR) or airline respirator: an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Interior structural firefighting: the physical activity of fire suppression, rescue or both, inside of or in close proximity to buildings or enclosed structures which are involved in a fire situation beyond the incipient stage.

Procedures

- For all IDLH atmospheres, all officers and personnel shall ensure that:
    1. At least two firefighters enter the IDLH atmosphere and remain in visual or voice contact with one another at all times;
    2. One firefighter or, when needed (see below), more than one firefighter is located outside the IDLH atmosphere;
    3. Visual, voice, signal line, or reliable radio communication is maintained between the firefighter(s) in the IDLH atmosphere and the firefighter(s) located outside the IDLH atmosphere;
    4. The firefighter(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;
    5. The incident commander or designee is notified before the firefighter(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;
    6. The incident commander or designee, once notified, provides necessary assistance appropriate to the situation;
    7. Firefighter(s) located outside the IDLH atmospheres are equipped with:
        - Pressure demand or other positive pressure SCBAs
        - Appropriate retrieval equipment for removing the firefighter(s) who enter(s) these hazardous atmospheres or equivalent means for rescue where retrieval equipment is not required.
- In addition to the requirements set forth above, in interior structural fires, all officers and personnel shall ensure that:
    1. At least two firefighters are located outside the IDLH atmosphere; and
    2. All firefighters engaged in interior structural firefighting use SCBAs.

3. One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

- Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.
- Facepiece seal protection:
    1. Respirators (including SCBA) with tight-fitting facepieces shall **not** be worn by firefighters who have:
        - Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
        - Any condition that interferes with the face-to-facepiece seal or valve function.
    2. A firefighter who wears corrective glasses or goggles or other personal protective equipment, shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face.
    3. For all tight-fitting respirators, firefighters shall perform a user seal check each time they put on the respirator using the procedures outlined below.
- The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on, as follows:
    1. Positive pressure check: Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.
    2. Manufacturer's Recommended User Seal Check Procedures: The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive pressure check procedures provided that the manufacturer's procedures are equally effective.

Maintenance of system components

- Cleaning
    1. Generally, all components of the SCBA system can be cleaned by wiping down with a damp towel.
    2. In situations of gross accumulation of dirt, it is acceptable to hose off the entire SCBA assembly. When hosing off the unit it is important to keep the second stage regulator connected to the waist belt to prevent water from entering.
    3. After cleaning, all components should be air or towel dried. Forced drying in hot air or sunlight will damage components.
- Disinfecting
    1. The face piece should be cleaned and disinfected after each use with materials supplied by the department only.
    2. In cases of gross accumulation of dirt, the face piece may be immersed in water with a mild detergent. Before immersing any face piece the voice amplifier must be removed.
- Batteries
    1. SCBA system components require the use of several batteries. Career staff will replace all SCBA batteries annually. Powered voice emitter batteries can replaced as needed.
- Repairs
    1. Other than replacement of batteries and “O”-rings repairs of the SCBA shall be by a contracted vendor or manufacturer. Firefighters shall report any and all defects, failures or repairs by completing the appropriate form and removing the unit from service. Career staff will maintain a department wide list of all SCBA units and cylinders and will handle hydro-testing and other service.

Inspection/Functional Test

- Monthly Checks
    1. The monthly check shall be completed on a regular time specified by the department. Typically this check shall be done during a station/equipment check. Firefighters will document their findings on the SCBA inspection form located on the department website (appendix II). Step by step procedures for the check are outlined in appendix II. All department RIT-PAKs will also be checked. The inspection forms will be located in a designated binder in all stations.

- **Beginning of shift/After Use (Career/Volunteer Duty Shift)**
    1. After the SCBA is cleaned and disinfected the system shall be checked following the basic procedures listed on appendix I.

Fit Testing/Air Consumption Drill

- In order to maintain the safety of all department personnel, all SCBA certified personnel shall complete an annual face piece fit test. Results shall be recorded and placed in the firefighters personnel file. Fit testing shall be done by a qualified vendor.

- In addition to the face piece fit test, all SCBA certified personnel shall complete an annual consumption drill. The drill will verify that all personnel have sufficient competency with donning and using the SCBA, as well as confirming their air consumption rate (ACR) The results of the drill will be shared with the firefighter and placed in the firefighters personnel file.

References:
6.3A SCBA Inspection/Functional Test Procedures - Daily
6.3B SCBA Inspection/Functional Test Procedures - Monthly
6.3C SCBA Monthly Inspection Checklist
NFPA 1500
OSHA 29 CFR 1910.134