

TOWNSHIP FIRE DEPARTMENT

CHAPTER 1: ADMINISTRATIVE OPERATIONS

Part 2: Administrative Policies

Subject: Respiratory Protection Program

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Section: 1-2-2

Effective Date: 04/23/07

Revised Date: Replace existing SOG 1-2-2

- 2.01 Purpose. Township Fire Department recognizes that occupational respiratory hazards may exist during routine and emergency operations. These hazards can be in the form of harmful dusts, fogs, mists, vapors, fumes, gases, smoke, and airborne diseases. In some cases these hazards may represent an Immediately Dangerous to Life or Health (IDLH) condition.
- 2.02 Goal. To utilize any or all of the following to ensure proper respiratory protection throughout an incident.
- A) Engineering controls.
 - B) Administrative controls.
 - C) Respirators.

Engineering controls, such as forced ventilation can be utilized to remove the contaminated air from the work area; however, engineering controls are not always feasible for some of our operations. Administrative controls are to limit the persons' exposure time in the contaminated area and require accurate monitoring of exposure levels. In situations where engineering controls have not completely controlled the identified hazards, or the administrative controls do not sufficiently reduce exposure levels; respirators and other protective equipment must be used.

- 2.03 Definitions.
- A) Breathing Air Compressor: (BAC) Breathing air compressor system utilized to fill breathing air cascade bottles and cylinders.
 - B) Fit Test: To qualitatively or quantitatively evaluate the fit of a respirator on an individual with the same make, model, style and size respirator that will be used.
 - C) High Efficiency Particulate Air: (HEPA) filter, which is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter.

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- D) Immediately Dangerous to Life or Health: (IDLH), An atmosphere concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.
- E) Inhalation: The introduction of a chemical or toxic products of combustion into the body by way of the respiratory system.
- F) Oxygen Deficient Atmosphere: An Atmosphere that contains oxygen content less than 19.5% by volume.
- G) Qualitative Fit Test: (QLFT), checks leakage in the respirator through the use of nontoxic substances that the user can taste if the respirator doesn't fit properly.
- H) Quantitative Fit Test: (QNFT), uses instrumentation to test the fit of the respirator.
- I) Respiratory Protection: Equipment designed to protect the wearer from the inhalation of contaminants. Respiratory protection includes positive pressure self-contained breathing apparatus (SCBA), positive pressure airline respirators (SARs), and air purifying respirators.
- J) Supplied-Air Respirator: (SAR; also called airline respirator). Positive pressure respirator that is supplied air through an airline hose from breathing air cylinders.
- K) Self-Contained Breathing Apparatus: (SCBA). A positive pressure atmosphere-supplying respirator in which the breathing air source is carried by the user.
- L) Tuberculosis: TB, a lung infection spread by aerosolized droplets in the air, usually the result of coughing and sneezing.

2.04 Responsibilities. All members of Township Fire Department, Inc. have the responsibility to learn and follow this guideline.

- A) Township Fire Department, Inc. shall furnish its personnel with the appropriate level of respiratory protection equipment to meet the anticipated respiratory hazard:

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- 1) Provide self-contained breathing apparatus (SCBA) or Supplied Air Respirator (SAR) and require firefighters to use that apparatus in any area where the atmosphere is hazardous, is suspected of being hazardous or may become hazardous.
 - 2) Provide all firefighters working below ground level or inside any confined space with SCBA or SAR and require them to use that apparatus unless the safety of the atmosphere can be established by testing and continuous monitoring.
 - 3) Adopt and maintain a respiratory protection program in compliance with Comm 32.
 - 4) Assure that all sources of compressed gaseous breathing air, such as compressors, used for filling SCBAs are tested to assure their compliance with air standards.
 - 5) Hydrostatically test each breathing air cylinder/tank within the time limits specified by the manufacturer of the apparatus and by federal, state or local agency with jurisdiction over the possession and use of the apparatus.
 - 6) Provide High Efficiency Particulate Air (HEPA) filter, mask or other approved respirator and require personnel to use to help minimize significant exposure to TB and other airborne diseases when responding to and caring for patients with suspected or known TB and other airborne diseases.
- B) Chief Training and Safety Officer shall:
- 1) Assure that an effective fit testing program is in place and fit testing is conducted a minimum of once a year for all firefighters whose responsibilities require them to wear SCBAs and/or SARs.
 - 2) Provide training that is understandable to personnel who are required to wear respiratory protection.

2.04 Compliance.

- A) ALL SCBA placed into service after April 1, 1991, shall meet NFPA 1981 and shall be of the positive pressure type only.

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- B) All SCBAs and SARs must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification.
- C) All supply air tanks for SCBAs and SARs (not including reserve escape air supply tanks) shall have a minimum NIOSH Service Life Rating of 30 minutes.
- D) Compressed breathing air in a self-contained breathing apparatus cylinder or a supplied air respirator cylinder shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989

2.05 Fit Testing.

- A) Each new member shall be fit tested before being permitted to use SCBA or SAR in a hazardous atmosphere.
- B) Only members with a properly fitting SCBA or SAR facepiece shall be permitted to function in any area where the atmosphere is hazardous, is suspected of being hazardous or may become hazardous.
- C) The facepiece seal capability of each member qualified to use SCBA and/or SAR shall be verified by qualitative or quantitative fit testing on an annual basis and:
 - 1) Upon request.
 - 2) When there are changes in the employee's physical condition that could affect respiratory fit (e.g. body weight, facial features, etc.)
 - 3) Anytime new types of SCBA or SARs are issued.
- D) Personnel will be fit tested with the same make, model, style and size of respirator that they will use in performing their assigned duties.
- E) Qualitative Fit Testing (QLFT) and Quantitative Fit Testing (QNFT) procedures shall comply with OSHA 1910.134

2.06 General Use Procedures.

- A) A firefighter shall not wear a beard or have facial hair that comes in contact with a facepiece seal if the firefighter's duties require him/her to use a SCBA or SAR. (See figure A on page 8 for acceptable facial hair)
- B) If a firefighter wears glasses, the firefighter shall use frames that do not pass through the seal area of the facepiece.
- C) Firefighters using SCBA shall operate in teams of 2 or more members who are:
 - 1) In communication with each other through visual, audible, physical, safety guide rope, electronic or other means to coordinate their activities; and
 - 2) In close enough proximity to each other to be able to provide assistance in case of an emergency.
- E) Respiratory equipment shall be used following the manufacturer's recommendations.
- F) Department personnel shall only use respiratory protection equipment issued, or otherwise approved by Township Fire Department.

2.07 Training.

- A) Training shall be provided a minimum of once a year to personnel who are required to wear respiratory protection.
- B) Respiratory protection training shall be provided to all personnel prior to being assigned duties that require respiratory protection.
- C) Retraining shall be provided anytime:
 - 1) A new make, model, style, size or type of respirator is issued.
 - 2) A need has been identified to ensure safe respirator use.
- D) Respiratory training shall be considered effective when personnel can demonstrate knowledge of:

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- 1) Why the respiratory protection is needed.
- 2) Limitations and capabilities of the respirator.
- 3) How to inspect, don, check the seals, and doff the respirator.
- 4) Use of respirator in emergency situations.
- 5) Maintenance and storage procedures.
- 6) Reporting damaged or defective respiratory equipment.
- 7) Familiarity with TFD's Respiratory Protection Program.

2.08 Maintenance.

- A) For the maintenance and care of SCBA including inspecting, function testing and record keeping, refer to SOG 3-1-2.
- B) Each firefighter is responsible for cleaning and disinfecting their own personal issued face piece.
- C) SCBA and SAR face pieces shall be cleaned after each use as well as inspected for defects.
- D) Any defective or damaged equipment shall be reported, tagged and removed from service until repaired or replaced.
- E) Replacement or repairs shall be done by experienced persons with parts designed for the respirator.
- F) HEPA masks shall be replaced after each use.
- G) This respiratory protection program will be reviewed periodically to ensure it is effective and properly implemented.

2.09 Medical.

- A) Any personnel exposed to airborne respiratory diseases must complete the following forms:
 - 1) Employers First Report of Injury or Disease
 - 2) Personal Injury Report
 - 3) State form

2.10 Storage.

- A) All respirators shall be stored to protect against dust, sunlight, temperature extreme, excessive moisture, and damage from chemicals. They shall be packed or stored to prevent deformation of the facepiece.
- B) Each firefighter shall be responsible for insuring the personal face piece issued to them is stored properly.
- C) HEPA masks shall be stored in a plastic bag or plastic container as not to cause deformation in accordance with manufacturer's recommendations.

2.11 Record Keeping.

- A) Fit Test Records shall be retained for respirator users until the next fit test is administered. The record will indicate name of person tested, make of mask, model, style and size, type of fit test, pass/fail results, and test date.
- B) Records shall be kept on individuals not qualified to wear respirators in their personnel files only to the extent that the individual is not respirator qualified.
- C) All maintenance performed on breathing apparatus shall be documented and retained for the length the breathing apparatus is in service.
- D) Reoccurring maintenance problems shall be investigated and documented.
- E) All hydrostatic test records of breathing apparatus cylinders shall be retained for the length the cylinder is in service.
- F) All maintenance performed on breathing air compressors owned by Township Fire Department will be retained for the length the BAC is in service.
- G) Results from all breathing air analysis performed on BACs owned by TFD will be retained for the length the BAC is in service.

2.12 Intent. The intent of this guideline is not to:

- A) Require an annual physical.
- B) Require the services of a physician to certify the Firefighter or Associate member qualified to wear a respirator.
- C) Require fit testing for the Firefighter or Associate member whose duties do not require respiratory protection.
- D) Allow the use of on-demand type SCBA or SAR.

Figure A:

**Firefighter Facial Hair Policy for
SCBA Use within Township Fire Department**

