


| | | |
|---|--|--|
|  | Terryville Fire Department Best Practices | |
| | <u>Subject</u> Respiratory Protection | BP# 1-06 |
| | <u>Authority</u> Chief of Department | Initiated 12/30/10 Revised 4/1/16 |

A. PURPOSE

1. To provide a standard policy for the Terryville Fire Department. This policy is designed to ensure that all firefighters engaged in emergency operations will be provided personal protection equipment to eliminate respiratory hazards. These hazards include, but are not limited to, by-products of combustion (smoke, heat, toxic gases, and oxygen deficiency, which present a working environment that is Immediately Dangerous to Life and Health (IDLH). This policy establishes when respiratory protection shall be used and shall meet the intent of the OSHA Respiratory Protection Standard, 29 CFR 1910.134 and amendments.
2. Self-Contained Breathing Apparatus (SCBA) shall be worn in all IDLH atmospheres. Engineering controls, such as ventilation, may be used when the Incident Commander (IC) is able to determine, by metering, that no respiratory hazard exists before respiratory protection can be removed. Ventilation during structural firefighting shall NOT be considered as a substitute for the use of respiratory protection.

B. APPLICATION

1. This program shall apply to all members who may be or are required to wear respiratory protection during firefighting or other emergency operations where an IDLH or other respiratory hazard exists
2. The Terryville Fire District will be responsible for any required expenses resulting from the member's participation in the respiratory protection plan.

C. DEFINITIONS

1. IDLH – Immediately Dangerous to Life and Health, means 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. This would include structural fires, chimney fires, vehicle fires, Haz-Mat incidents, or any other operations which may pose a respiratory hazard.

2. Rescue Team – This team shall consist of at least two (2) firefighters in full protective clothing with SCBA, have portable radios, and rescue equipment immediately available. One member shall remain outside the entry point while the other member(s) may perform limited outside duties designated by the Incident Commander(IC), as long as those duties do not jeopardize the safety of the interior firefighters.
3. Buddy System – Operating in teams of two or more firefighters. Under this system, no single firefighter shall be assigned a task to perform in an IDLH atmosphere. Members operating under the buddy system shall maintain voice or visual contact with the other team member.
4. Medical Evaluation – Shall mean the completion of the attached Medical Questionnaire forms found in Appendix C of 29 CFR 1910.134 and review by a Professional Licensed Health Care Provider (PLHCP)
5. Medical Examination – A physical examination by a PLHCP, selected by the Terryville Fire District.
6. Fit Testing – A test conducted on each individual who is expected to wear a respirator. The fit test will be done using the face piece selected for that individual, to insure a proper seal. Fit testing shall meet the QLFT (Qualitative Fit Testing) protocol found in Appendix B of 29 CFR 1910.134.

D. RESPONSIBILITIES

1. Board of Fire Commissioners

- The Board of Fire Commissioners shall have the overall administration of the Respiratory Protection Program including:
 - Appointment of the Fire Chief as Respiratory Program Administrator
 - Developing and implementing a budget to administer the Respiratory Protection Program
 - Providing a copy of the program and Job Task Analysis to the PLHCP
 - Ensuring that the compressed air maintains Grade D quality and that the air compressor is serviced and tested at least annually.
 - Assisting the program administrator in the respiratory protection program

2. Fire Chief – Program Administrator

- The program administrator is responsible for administering and overseeing the respiratory protection program. The program administrator may delegate certain responsibilities to the Department Safety Officer or company officers. Duties of the program administrator include:
 - Developing and implementing the respiratory protection program
 - Developing policies, rules, and regulations
 - Selection of the respiratory protection options
 - Determining those individuals required to participate in the program
 - Identifying work areas or operations that require individuals to wear respirators

- Ensuring that all individuals expected to use respirators are given a medical evaluation
- Ensuring that physical exams are conducted if required by the PLHCP
- Implementing a fit testing schedule for all individuals expected to wear a respirator
- Instituting a respirator training and retraining program
- Ensuring proper storage and maintenance of respirators
- Developing and maintaining all respirator training and respirator records
- Evaluating and updating the program as needed

3. Company Officers

- Company Officers are responsible for ensuring that the respiratory protection program is implemented. In addition to being knowledgeable about the program requirements for their own protection, Company Officers shall ensure that the program is understood and followed by all individuals under their charge. Duties of Company Officer include:
 - Ensuring that individuals under their supervision have received proper training, fit testing and medical evaluations according to the established schedule
 - Ensuring the availability of SCBA for all personnel working in an IDLH atmosphere
 - Enforcing the proper use of SCBA when necessary
 - Ensuring that SCBAs are properly cleaned, maintained, and stored according to the respiratory protection program
 - Continually monitoring work areas and operations to identify respiratory hazards
 - Report to the Program Administrator or Deputy Administrator any individual having difficulty wearing or using SCBA
 - Ensuring that all personnel operating in IDLH incidents follow Department Policies and Best Practices.

E. RESPONSIBILITIES

1. Members

- Each member shall wear his/her SCBA when and where required and in the manner in which they were trained.
- Each member shall care, maintain, and store their SCBA as instructed.
- Shall inform the Company Officer if the SCBA face piece no longer fits well and request to be refitted with the proper fitting face piece
- Inform the Company Officer should you have difficulty wearing or using an SCBA
- Inform the Company Officer or Program Administrator of any respiratory hazards that you feel are not adequately addressed in the workplace and any other concerns you have regarding the program.

F. PROGRAM ELEMENTS

1. Selection of Respirator Procedures

- The Terryville Fire Department currently uses SCOTT brand SCBAs. The SCOTT 4.5 is certified by NIOSH and shall be used in accordance with the certification. Personnel shall be fit tested annually. Should the individual require a different mask than the standard, the department shall issue the member a proper fitting mask.

G. HAZARD EVALUATION WHERE SCBA IS REQUIRED

1. Structure Fires

- Due to the unknown respiratory hazards posed by structural firefighting, all members of the Terryville Fire Department engaged in interior structural firefighting (as defined in the definition section of this program) shall use SCBAs. The SCBA shall remain in use until overhaul is complete and the fire is determined to be out by the IC, or the respiratory hazard has been eliminated and deemed safe by the use of meters.
- Firefighters who are performing exterior operations at a structural fire may be required to use SCBA depending on the operation and potential respiratory hazard, as determined by the IC, Safety Officer or Company Officer.
- Each and every firefighter using SCBA shall be required to go through Fire Scene Rehabilitation after each air cylinder is used, and before reentering the structure. Firefighters must complete all aspects of rehabilitation as specified in the department's policies and best practices. On scene medical personnel have the final approval before a firefighter can reenter the IDLH atmosphere.

2. Vehicle Fires

- Vehicle fires are known to produce toxic gasses that may be IDLH. Firefighters who are engaged in vehicle firefighting operations shall use SCBA while performing this operation.

3. Dumpster / Trash Container Fires

- These fires (if not classified as a structure fire) when involved, shall require firefighters to wear SCBA while performing firefighting operations.

4. Chimney Fires

- Firefighters operating on the roof level at chimney fires shall be required to wear SCBAs.

5. Carbon Monoxide Incidents

- Due to the fact that carbon monoxide presents a potential respiratory hazard, personnel operating a CO alarms, shall wear SCBA until the structure has been declared safe and by verifying with a CO Meter.

6. Hazardous Materials Incidents

- Firefighters who respond to or operate at a hazardous materials incident may be exposed to a variety of known and unknown respiratory hazards. SCBA shall be worn by all personnel operating in the Hot Zone, Warm Zone, and Decontamination Zone as determined by the IC.

7. Special Rescue Situations

- Special rescue situations may include below grade, confined space, and other areas where the IC cannot ensure the quality of the atmosphere. In these cases personnel shall be required to wear SCBA. Engineering controls such as ventilation may be used with constant monitoring and may ensure with certainty the quality of the atmosphere in the rescue environment. Special rescues may require responding personnel to be certified in technical or confined space rescue.

8. Other Respiratory Hazards

- Nothing in this policy is intended to restrict the IC, Safety Officer, or Company Officer from requiring personnel to use SCBA when he/she suspects a potential respiratory hazard. Officers are encouraged to adequately size up the situation and consider the safety of personnel when making decisions regarding SCBA. When in doubt, order the use of SCBA.

H. MEDICAL EXAMINATIONS

1. All new members shall be required to complete a Medical Evaluation Form, Appendix C of 29CFR 1910.134. New members must receive a PLHCP certification that they are able to wear and SCBA. Any member refusing a medical evaluation will be terminated.

I. MEDICAL EVALUATIONS

1. Personnel who may be subject to or required to wear SCBA must pass a medical evaluation before being permitted to wear SCBA in training or on the job. Personnel are not permitted to wear SCBA until a PLHCP has determined that they are medically able to do so.
2. A PLHCP at Sound Medical Systems will provide the medical evaluation. The medical evaluation procedures are as follows:
 - The member will be sent directly to the PLHCP for medical evaluation
 - The medical evaluation will be conducted using a questionnaire provided by Sound Medical Systems

- Follow-up medical evaluations will be provided to members as required by this standard, or as required by the PLHCP.
- All members will be granted to opportunity to speak with the physician about their medical evaluation, if they so request.
- After a member has received clearance and begun to wear SCBA, additional medical evaluations will be provided:
 1. Annually
 2. Member reports signs and/or symptoms related to their ability to use and SCBA, such as shortness of breath, dizziness, chest pains, or wheezing
 3. The PLHCP or supervisor informs the Program Administrator that the employee needs to be reevaluated
 4. Information from the program, including observations made during fit testing and program evaluation, indicates a need for reevaluation
 5. A change occurs in the workplace that may result in an increased physiological burden on the member
- All examinations, evaluations and questionnaires are to remain confidential between the member and the PLHCP

J. FIT TESTING

1. Fit testing is required for all members wearing SCBA
2. Fit testing will be conducted in accordance with the following schedule:
 - Prior to being allowed to wear SCBA
 - Annually
 - When there are changes in the member's physical condition that could affect respiratory fit (obvious changes in body weight, facial scarring, etc.)
3. Members will be fit tested with the make, model, and size of SCBA mask that they will actually use.
4. The Program Administrator will conduct fit tests following the QLFT protocol found in Appendix B of the Respiratory Protection Standard.

K. RESPIRATORY USE

1. SCBA use is required for all members engaged in the following firefighting activities: structure fires, hazardous materials incidents, vehicle fires, dumpster fires, and special rescue situations, or any incident which may cause exposure to a respiratory hazard.

L. GENERAL PROCEDURES

1. Members will use their SCBA under conditions specified by this program, and in accordance with the training they receive on the use of each particular model. In addition, the SCBA shall not be used in a manner for which it was not certified by NIOSH or by its manufacturer.

2. All members shall conduct “user seal checks” each time that they wear their respirator. Members shall use either positive or negative pressure check (depending on which test works best for them) as specified in Appendix B-1 of the Respiratory Protection Standard.
3. Members who detect operational problems with, or experience failure of, the SCBA shall immediately notify their supervisor, sound their PASS alarm, and leave the hazardous environment with their partner.
4. Members are not permitted to wear any jewelry, ear protection, eyeglasses, or protective hoods in a manner that may interfere with the face piece seal. Facial hair or any other hairstyle may not interfere with the face to face piece seal.

M. INTERIOR STRUCTURAL FIREFIGHTING

1. Members engaged in interior structural firefighting shall:
 - Use SCBA for all fires beyond the incipient stage or as directed by the IC
 - Continue to use SCBA until the completion of overhaul
 - Work in a minimum of pairs and maintain voice and visual contact with members of each team
 - Be supported by two stand-by members who are available for immediate rescue of interior firefighters, at each point of entry as determined by the IC
2. Each stand-by member shall be dressed in full protective clothing and have SCBA immediately available to them. The function of one of the stand-by members shall be accountability of the firefighters inside the structure. The other stand-by member may assume other duties including IC or pump operator provided this individual is able to perform rescue assistance without jeopardizing the safety or health of any firefighter working at the incident.
3. Nothing herein shall prohibit the IC from establishing a Rapid Intervention Team (RIT) to replace the two firefighters outside, provided a RIT is established for each entry point as determined by the IC.
4. In the event that the IC determines the need to perform emergency rescue activities upon the arrival of the entire team, the IC must:
 - Notify the dispatcher of entry without the two stand-by members
 - Enter with or without a charged handline, perform emergency rescue, and immediately leave the structure
 - After the incident, document in writing to the Chief, a detailed explanation regarding the deviation of policy

N. OTHER THAN INTERIOR STRUCTURAL FIREFIGHTING

1. For incidents requiring SCBA use other than Interior Structural Firefighting, members shall use SCBA whenever they may be exposed to environments which may become IDLH or other respiratory hazard, as directed by the IC

2. When the IC cannot ensure the members ability to escape from, hazardous environment, one member shall be stationed at the point of entry to maintain accountability and be readily available to perform immediate rescue.

O. AIR QUALITY

1. SCBA cylinders shall be filled with Grade D compressed air only. The Board of Fire Commissioners shall ensure that the compressed air maintains Grade D quality and that the air compressor is serviced and tested at least annually.

P. CLEANING

1. SCBA are to be cleaned and disinfected as needed. The best cleaning method is as follows:
 - Disassemble the SCBA, removing cylinder, mask and PASS device
 - Wash the face piece and associated parts in mild detergent with warm water
 - Disinfect the face piece with a diluted bleach solution
 - Rinse completely in clean warm water
 - Air-dry in a clean area
 - Reassemble the SCBA, test the function, and replace and defective parts, test function
 - Place back on apparatus, masks are to be stored in a bag or within an enclosed cab (do not store wet face pieces in storage bags).
2. Field cleaning of SCBA is to be done with 70% Isopropyl Alcohol wipes. There will be no sharing of SCBA masks in the field without proper cleaning.
3. The Program Administrator will ensure an adequate supply of cleaning and disinfecting material at the fire station, as well as field cleaning material. If supplies are low, employees should notify their supervisor who will in turn notify the Program Administrator.

Q. MAINTENANCE

1. SCBA are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employees. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer, except by those trained by the manufacturer to do such repairs. Repairs beyond the scope of our trained personnel will be conducted by the manufacturer or their designee.
2. The following items are to be checked after each use and weekly. The findings of these checks are to be properly recorded on the Truck Maintenance Forms:
 - Face piece
 1. Cracks, tears, holes
 2. Face piece distortion
 3. Cracked, loose, or damaged lens

- Headstraps
 1. Breaks or tears
 2. Broken buckles

 - Valves
 1. Residue or dirt
 2. Damage to valve or valve material
 - Gauges, Regulators & Air Lines
 1. Damage or inaccuracy
 2. Leaks
 - PASS Alarm
 1. Operation
 2. Battery condition
 - Body Harness
 1. Tears, rips, fraying or otherwise damaged straps
 - Cylinder
 1. Air supply full
 2. Hydrostatic test date
 3. General cylinder condition
3. SCBA that are defective or that have defective parts shall be taken out of service immediately. If during an inspection or during use, a member discovered an SCBA with a defect, he/she is to bring the defect to the attention of his/her supervisor. Supervisors will give all defective SCBA to the Program Administrator. The Program Administrator will decide whether to:
- Temporarily take the SCBA out of service until it can be repaired
 - Perform a simple repair on the spot
 - Dispose of the SCBA or part due to irreparable condition
4. When a respirator is taken out of service, it will be appropriately documented in a Red Alert Work Order, tagged indicating the problems, brought to Station one and placed on the equipment rack behind the First Responder so it can be sent out for service.

R. STORAGE

1. Storage of SCBA shall be in their designated place on the apparatus. Masks shall be stored in plastic or nylon bags, or enclosed apparatus cabs to prevent exposure to road dirt or other contaminants.

S. TRAINING

1. Annually, each employee shall attend and successfully complete SCBA training that is based on current NFPA standards. Training will be both knowledge and hands-on based. Training will include:
 - The need for respirator use, and how improper fit, usage, or maintenance can compromise the protective effectiveness of the SCBA
 - Limitations and capabilities of SCBA
 - How to effectively use SCBA

- How to inspect, don, doff, use, and perform proper seal checks
- Procedures for maintenance field cleaning and storage
- How to recognize medical symptoms that may compromise the safety of the wearer

T. PROGRAM EVALUATION

1. The Program Administrator shall annually and as needed evaluate the respiratory program to ensure that:
 - Current written programs are being effective and properly implemented
 - Members are properly using SCBA
 - The program continues to be effective

U. RECORDKEEPING

1. The Program Administrator shall keep and maintain all documentation in the areas of:
 - Medical evaluations (PLHCP recommendation only)
 - Training records

EFFECTIVE DATES

The effective date of this policy shall be January 1, 2011

Next scheduled evaluation of this policy shall be December 1, 2016

Last annual review of Respiratory Protection Program Date: _____

Reviewed by _____

Name: _____ Date: _____

Job Title: _____ Company: _____

Type of Respirator: _____ Size: _____
(make, model, style)

Type of Cartridge: _____

Seal Check

- Negative Pressure check Completed
- Positive Pressure Check Completed

Seal Obtained: Yes No

Taste Threshold Screening

Reaction: Yes No

If yes, # of squeezes _____ *

Bitrex Fit Testing

One minute each

Activity

Reaction

normal breathing

Yes No

deep breathing

Yes No

turning head

Yes No

~~~~~

nodding head

Yes  No

talking

Yes  No

bending over or jogging

Yes  No

normal breathing

Yes  No

Member Signature \_\_\_\_\_

Date: \_\_\_\_\_

Testing Performed by: \_\_\_\_\_

Date: \_\_\_\_\_

\* When testing fit testing maneuver, prime the tent with 10 squeezes of Bitrex, then use the number of squeezes that elicited a response in the screening test for each of the test maneuvers.

RESPIRATORY PROTECTION PROGRAM QUALITATIVE FIT = TESTING