

**BARKHAMSTED FIRE
DISTRICT**

RESPIRATORY PROGRAM

October 1, 2002

In accordance with OSHA 29CFR1910.1034

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SECTION I - INTRODUCTION

It is the policy of the Barkhamsted Fire District and its fire Departments (Barkhamsted East, Pleasant Valley, and Riverton) to maintain comprehensive occupational safety and health programs based upon sound engineering, education, and enforcement. This document establishes the District and Departmental policy, responsibilities, and requirements for the protection of firefighters whose job requires the use of respiratory protection.

This document will also provide assistance to the firefighter in the use and care of respiratory protection.

The Barkhamsted Fire District Department Chiefs or designees will act as the program administrator and is solely responsible for all facets of this program and has full authority to make necessary decisions to ensure the success of this program.

SECTION 2 - STANDARD OPERATING PROCEDURES

General

Firefighters shall wear a self-contained breathing apparatus (SCBA) under the following conditions:

1. while engaged in interior structural firefighting;

2. while working in confined spaces where toxic products or an oxygen deficient atmosphere may be present;
3. during emergency situations involving toxic substances; and
4. during all phases of firefighting and overhaul.

Firefighters wearing an SCBA must activate the personal alert safety system (PASS) device before entering an area where respiratory protection is required.

Firefighters wearing SCBA shall conduct a seal check prior to each use.

Firefighters shall not remove the SCBA at any time in the dangerous atmosphere. SCBA shall be used in accordance with the manufacturers instructions (see Appendix A).

All firefighters shall continue to wear an SCBA until the officer in charge determines that respiratory protection is no longer required.

Protective Clothing

Firefighters wearing an SCBA shall be fully protected with the use of approved structural firefighting clothing that meet the requirements of 29CFR 1910.156(e).

Procedures for Interior Structural Firefighting

In interior structural fires, the fire Departments shall ensure that:

- At least two firefighters enter the immediately dangerous to life and health (IDLH) atmosphere and remain in visual or voice contact with one another at all times;
- At least two firefighters will be located outside the IDLH atmosphere; and
- All firefighters engaged in interior structural firefighting shall use SCBAs.

Notes:

- Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.
- There must always be at least two firefighters stationed outside during interior structural firefighting. They must be trained, equipped, and prepared to enter if necessary to rescue firefighters inside. However, the incident commander has the responsibility and flexibility to determine when more than two outside firefighters are necessary given the circumstances of the fire. The two-in / two-out rule does not require an arithmetic progression for every firefighter inside, i.e. the rule should not be interpreted as four-in / four-out, eight-in / eight-out, etc.
- Firefighters will wait to commence interior structural firefighting, until the proper number of firefighters can be assembled on scene as required by the response. During this time, the fire will be attacked only from the outside, sizing-up operations will occur and emergency rescue necessary to save lives may take place.
- One of the standby firefighters may have other duties such as serving as the incident commander, safety officer, or operator of fire apparatus. However, one of the outside firefighters must actively monitor the status of the inside firefighters and will not be assigned additional duties. The second outside firefighter may be involved in a wide variety of activities. Both of the outside firefighters must be able to provide support and assistance to the two interior firefighters; any assignment of additional duties for one of the outside firefighters must be weighed against the potential for interference with this requirement. Proper assignment of firefighting activities at an interior structural fire must be determined by the incident commander and is dependent on the existing firefighting situation. Consideration of all worksite variables and conditions, and the judgement of the incident commander is critical.
- The two firefighters entering an IDLH atmosphere to perform interior structural firefighting must maintain visual or voice communication at all times. Electronic methods of communication such as the use of radios shall not be substituted for direct visual contact

between team members in the danger area. However, reliable electronic communication devices are not prohibited and certainly have value in augmenting communication and may be used to communicate between inside team members and outside standby firefighters.

SECTION 3 - TRAINING

Self Contained Breathing Apparatus Training

Firefighters wearing respiratory protection shall be trained in proper use, cleaning and maintenance. No firefighter shall wear respiratory protection without training as specified in this document.

New Recruit Training

No firefighter is to use respiratory protection unless SCBA training has been successfully completed.

Annual Training

At a minimum, SCBA training shall be provided to all firefighters of the Departments annually. If the employee's knowledge or use of the SCBA indicates that the employee has not retained the required understanding or skill; or any other situation arises in which retraining appears necessary to ensure safe SCBA use then the employee shall be retrained on SCBA use.

Course Content

Initial and annual training in respiratory protection shall be conducted as specified in Appendix C.

Fill Station Training

SCBA cylinders will be filled only by firefighters who have completed fill station training. Retraining will be provided annually.

Course Content

Initial and annual fill station training shall be conducted as specified in Appendix D.

SECTION 4 - RESPIRATOR FITTING AND SEAL CHECK

Each firefighter must pass a face piece fit-test during initial and annual training. Additional fit tests may be required throughout the year if the fit is suspect or there is a visual change in the firefighters physical condition.

However, prior to fit testing, the firefighter must pass the medical evaluation requirements portion of this respiratory program.

Fit testing of SCBA shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode. This shall be done by equipping the face piece with appropriate adapters and filters.

Appendix B of this program contains an example of a fit-test record.

Inspection Before Use

When using SCBA, each firefighter shall select and wear the correct size facepiece as determined by initial and annual fit testing. A firefighter shall not wear respiratory protection unless the proper size facepiece is available and the equipment is in proper working condition according to the manufacturer's specifications.

Effective Seal Required

An effective face-to-facepiece seal is extremely important when using respiratory protective equipment. Minor leakage can allow contaminants to enter the facepiece, even with a positive pressure SCBA. Any outward leakage will increase the rate of air consumption, reducing the time available for use and safe exit. The facepiece must seal tightly against the skin, without penetration or interference by any protective clothing or other equipment.

Nothing can be between the sealing surface of the mask and the face of the wearer, including but not limited to, eyeglasses, protective hoods, and beards or other facial hair. If firefighters must wear glasses while wearing the SCBA, the Departments shall provide devices such as spectral kits to the firefighter.

Firefighters shall perform a user seal check prior to every SCBA use. SCBA can only be worn when an adequate seal is achieved.

SECTION 5 - INSPECTION, STORAGE, MAINTENANCE AND AIR SUPPLY

Inspection

Regular monthly inspections are required to ensure that all respiratory protection equipment is properly operating and available for use.

Inspection Schedule

All SCBA and spare cylinders shall be inspected at least monthly. Guidelines for inspections are in the manufacturer's instructions found in Appendix A of this program. Also, the SCBA shall be checked for proper function before and after each use.

After each inspection, the appropriate forms (see Appendix E) shall be completed. SCBA units determined to be unfit for use shall be taken out of service, and tagged with a description of the particular defect.

In the event replacement or repair of SCBA components is necessary, it shall be performed according to manufacturer's instructions and only by persons trained specifically trained to perform the repairs, or returned to the manufacturer's service facility.

Firefighters will not subject SCBA units to unnecessary abuse due to neglect and/or carelessness. Caution must especially be exercised to protect the facepiece section of the mask from being scratched or damaged.

Each SCBA shall be cleaned and disinfected after each use. Only cleaning/sanitizing solutions for respiratory equipment will be used for cleaning and disinfecting. (NOTE: the required SCBA cleaning procedures are found in Appendix B-2 of the Respiratory Protection Standard. The Respiratory Protection Standard is found in Appendix G of this document).

SCBA cylinders shall be hydrostatically tested within the period specified in the container regulations of the Department of Transportation 49 CFR part 178. Generally, metal cylinders must be tested every five (5) years and composite cylinders every three (3) years. Composite cylinders will be removed from service after 15 years from the first hydrostatic test date.

Storage

All units shall be stored so that they are protected against direct sunlight, dust accumulation, severe temperature changes, excessive moisture, fumes, and damaging chemicals. Care is to be taken so that the means of storage does not distort or damage rubber or elastomeric components.

Air Supply

Breathing air in the SCBA cylinder shall meet the requirements of the Compressed Gas Association G-7.1-1989, COMMODITY SPECIFICATION FOR AIR, with a minimum air quality of Grade D. The Fire Departments shall ensure that private vendors supplying compressed breathing air provide a copy of the most recent inspection and certification.

A competent laboratory shall check the purity of the air from the Fire Departments' air compressor at least annually.

The Fire Departments shall assure that sufficient quantities of compressed air are available to refill SCBA for all emergencies. This shall be accomplished through mutual aid with (or: this shall be accomplished with the use of a mobile air compressor).

Air cylinders for SCBA shall be filled only by personnel who have completed fill station training.

Compressed oxygen shall not be used in open-circuit SCBA.

SECTION 6 - MEDICAL EVALUATION

A medical evaluation to determine the firefighter's ability to wear a SCBA shall be provided by the District. Only firefighters that are medically able to wear SCBA will be allowed to do so. Appendix F contains the medical evaluation protocol.

SECTION 7 - RECORDKEEPING

Completed SCBA inspection forms will be maintained by Chiefs or designees

Chiefs or designees will maintain Records/results of air quality tests.

Chiefs or designees will maintain completed fit test records.

Each firefighter will receive a copy of his/her fit test record.

Chiefs or designees will maintain records for both recruit training as well as ongoing SCBA training records.

Chiefs or designees will maintain fill station training records.

SUMMARY OF RESPIRATORY PROTECTION PROGRAM RECORDS

Type of Record	Keep Records For
SCBA Inspection Records <ul style="list-style-type: none">• After Use• Monthly	<ul style="list-style-type: none">• until replaced• one month
SCBA Maintenance/Repair Records	life of equipment
Air Quality Tests	1 Year
Fit Test	1 Year (maintain current record only)
Medical Evaluation	length of employment, plus thirty years (1910.1020)
Training	5 Years
Those Who Fill Cylinders	1 Year

SECTION 8 - PROGRAM EVALUATION

Evaluation Requirements

The effectiveness of the SCBA program shall be evaluated and corrective actions taken to ensure the respiratory protection program is properly implemented. The fire Departments will regularly consult with firefighters to assess their views on the effectiveness of the program and to identify any problems.

Chiefs or designees will conduct the evaluation. The evaluation will ensure:

- procedures for purchasing of approved equipment are in place;
- all firefighters are being properly fitted with respiratory protection;
- all firefighters are properly trained;
- the proper equipment, cleaning, inspection, and maintenance procedures are implemented;
- the required records are being kept; and
- changes are implemented to correct deficiencies.

Section - 9 Program Monitoring

Periodic monitoring of the respiratory protection program is necessary to ensure that all firefighters are adequately protected. Random inspections shall be made by the Chiefs or designees to ensure that the provisions of the program are being properly implemented.

Barkhamsted Fire District
Respiratory Program
October 1, 2002

APPENDIX A - Manufacturer's Instructions

NOTE: A copy of the manufacturer's instructions for the SCBA used by the Departments shall be kept in a file at the appropriate fire house and referenced for use, maintenance and testing.

APPENDIX B - Respirator Fit Test Record

Date: (of fit test) _____

Firefighter: _____

SCBA Manufacturer: _____

Model: _____

NIOSH Approval Number: _____

Face piece Size

Small _____ Medium _____ Large _____

Conditions which could affect respirator fit (x appropriate conditions):

_____ Clean Shaven _____ Facial Scar _____ Dentures Absent

_____ 1 -2 Day Beard Growth _____ 2+ Day Growth

_____ Moustache _____ Glasses

Comments: _____

Fit Test Protocol
Used _____

_____ Pass _____ Fail

Comments: _____

Employee Acknowledgment of Test Results:

APPENDIX C - SCBA Training Outline

At a minimum, the following topics are to be covered in the SCBA training.

1. Why the SCBA is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
2. What the limitations and capabilities of the SCBA are.
3. How to use the SCBA effectively in emergency situations, including situations where the SCBA malfunctions.
4. Instruction on recognizing medical signs and symptoms that may limit or prevent the effective use of the SCBA.
5. How to inspect, put on and remove, use, and check the seals of the SCBA.
6. What the procedures are for maintenance, and storage of the SCBA.
7. The general requirements of the PEOSH Respiratory Protection Standard.

APPENDIX D - FILL STATION TRAINING OUTLINE

At a minimum the following topics are to be covered in the fill station training:

1. Procedures for inspecting the SCBA cylinder for damage.
2. Information to ensure that the cylinder has the proper hydrostatic test date.
3. Information to ensure that composite cylinders older than 15 years are not refilled and are removed from service.
4. Procedures for safely operating the fill station.
5. Information on the importance of using at least grade D air.
6. Information on the consequences of cylinder failure.
7. The manufacturer's instructions for the fill station.
8. Record keeping requirements.

APPENDIX E - AFTER USE/DAILY INSPECTION FORM

SCBA Inspection Checklist

Type of Check: ___ Weekly ___ Monthly ___ After Use

Checked by: _____

Date: _____

Regulator No.	R-1	R-2	R-3	R-4	R-5	R-6	R-7	R-8
Bottle No.	B-	B-	B-	B-	B-	B-	B-	B-
Mask No.	M-	M-	M-	M-	M-	M-	M-	M-
Harness Check								
Conditions of Straps, Buckles, Backplate								
O-Ring in Place								
High Pressure Hose								
Low Pressure Hose								
Operational Check								
Bottle Condition								
Cylinder Pressure (PSI)								
Harness Gauge Pressure								
Pressure Function								
Bypass Function								
Pack Alarm								
PASS Device								
Mask Check								
Regulator								
Exhalation Valve								
General Condition								
Cleanliness								

SEE ADDITIONAL COMMENTS ON BACK OF CHECKLIST

COMMENTS

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____

SPARE MASKS

Number	Condition
M-	
M-	
M-	
M-	
M-	

SPARE CYLINDERS

Number	Condition

APPENDIX F - MEDICAL EVALUATION PROTOCOL

Medical evaluation will be provided to firefighters before they are fit tested for respirator use.

The current district or individual medical provider will provide medical evaluations. Medical evaluation procedures are as follows:

The medical evaluation will be conducted using the required PEOSH questionnaire. The Program Administrator will provide a copy of this questionnaire to all firefighters requiring medical evaluations. All affected firefighters will be given a copy of the questionnaire to fill out. If needed, a stamped and addressed envelope for mailing the questionnaire to the current district or individual medical provider will be provided. Firefighters will be permitted to fill out the questionnaire during work time.

Firefighters will receive follow-up medical evaluations as required by the Respiratory Protection Standard, and/or as deemed necessary by the current district or individual medical provider.

Upon request, the firefighter will have the opportunity to speak with the health care professional about their medical evaluation.

The Program Administrator shall provide the current district or individual medical provider with a copy of this program.

Additional medical evaluations will be provided to firefighters under the following circumstances:

- The firefighter reports signs and/or symptoms related to their ability to wear to use an SCBA, such as shortness of breath, dizziness, chest pains, or wheezing;
- The current district or individual medical provider or supervisor informs the Program Administrator that the firefighter needs to be reevaluated;
- Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.

All examinations and questionnaires are to remain confidential between the firefighter and the health care provider. All medical records and completed questionnaires will not be kept by the fire Departments. The medical records and questionnaires will be under the control of current district or individual medical provider .

The current district or individual medical provider will provide the Program Administrator and firefighter with a written recommendation regarding the firefighter's ability to wear a respirator. Only the following information will be provided:

- a statement on the firefighters ability to wear a respirator,
- the need for follow-up medical evaluation if any are necessary, and
- a statement that the medical provider has provided the firefighter with a copy of the recommendation.

Medical records will be maintained in compliance with the Access to Employee Exposure and Medical Records (29CFR1910.1020). The Fire District will provide employees access to their medical records.