

# Maine Fire Training & Education

1/2/2007

**Subject:** Respiratory Protection Program

## 1) Purpose:

Maine Fire Training & Education has determined that employees who train firefighters at Structural Fires, Vehicle Fires, Dumpster Fires, Special Rescue Situations, and other incidents may be exposed to respiratory hazards during these operations. These hazards include smoke, heat, oxygen deficiency, and unknown toxic gases that in most cases present working environments that are Immediately Dangerous to Life and Health (IDLH).

The use of Self Contained Breathing Apparatus (SCBA) shall be the first line of defense against these respiratory hazards. Engineering Controls such as ventilation may be used when the Incident Commander (I. C.) is able to determine, by metering, that no hazard exists. Metering must be specific and the I.C. must be positively certain that no hazard exists. Ventilation during structural firefighting shall not be considered as a substitute for the use of SCBA.

## 2) Scope and Application:

This program applies to all employees who are required to wear SCBA during firefighter training activities. All employees who perform duties requiring the use of SCBA must be enrolled in the Maine Fire Training & Education's Respiratory Protection Program. Maine Fire Training & Education shall be responsible for any required expenses resulting from the employee's participation in the Respiratory Protection Program.

## 3) Responsibilities:

### State Fire Administrator:

The State Fire Administrator shall have the overall responsibility of the administration of the Respiratory Protection Program including:

- Development of the Respiratory Protection Program.
- Development of Policies, Rules and Regulations.
- Budgeting for program implementation.
- Appointment of Respiratory Protection Program Administrator.
- Determining those employees required to participate in the program.

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The State Fire Administrator is: ~~Steve Willis~~ David Niklaus (Interim)

## **Program Administrator:**

The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards.

Selection of respiratory protection options.

Monitoring respirator use to ensure that respirators are used in accordance with their certifications.

Arranging for and /or conducting training.

Ensuring proper storage and maintenance of respiratory protection equipment.

**Arranging for fit testing via outside approved agency**

Accept Qualitative or Quantitative fit testing documentation

Administering the medical surveillance program.

Maintaining records required by the program.

Updating the written program, annually and as necessary.

Will ensure an adequate supply of cleaning and disinfecting material, as well as field cleaning material.

Shall ensure that compressed air used maintains Grade D Quality and

Documentation of filling stations used are on file

Provide to the PLHCP the necessary information about the standard 1910.134 including a copy of the Respiratory Protection Standard 1910.134. Maine Fire Training & Education's Written policy, a list of hazards encountered in the work environments and for each employee requiring evaluation; his or her work area or job title. Proposed SCBA type and weight, length of time required to wear SCBA, expected physical work effort, potential temperature extremes, and information regarding type and weight of protective clothing.

The Respiratory Protection Program Administrator for Maine Fire Training & Education is Gene Cote.

## **Supervisors:**

Supervisors are responsible for ensuring that the respiratory protection program is implemented. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge.

## **Duties of the supervisor include:**

Ensuring that employees under their supervision (including new hires) have received appropriate training, medical evaluations, and fit testing prior to being assigned Training Assignments requiring the use of SCBA.

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Ensuring the availability of SCBA.  
Being aware of tasks requiring the use of SCBA.  
Enforcing the proper use of SCBA when necessary.  
Ensuring that SCBA are properly cleaned, maintained, and stored according to the respiratory protection program.  
Ensuring that SCBA fit well and do not cause discomfort.  
Continually monitoring work areas and operations to identify respiratory hazards.  
Report to the Program Administrator or the State Fire Administrator should an employee have difficulty wearing or when using an SCBA.  
Coordinate with the Program Administration how to address respiratory hazards or other concerns regarding the program.

Maine Fire Training & Education's Supervisors include, State Fire Administrator, East/West Deputy Administrators, ~~East/West FDSS~~ **Region 1 and Regional 2 Training Program Managers** and Field Supervisors.

## **Employees:**

Each employee has the responsibility to wear his/her SCBA when and where required and in the manner in which they were trained. Each employee must also:

- Care for, maintain, and store their SCBA as instructed.
- Inform their supervisor if the SCBA no longer fits well and request a new one that fits properly.
- Inform their supervisor should they have difficulty when wearing or using an SCBA.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and any other concerns that they have regarding the program.

## **4) Program Elements:**

### **Selection Procedures:**

Maine Fire Training & Education currently use Scott 4.5 SCBA and are NIOSH certified and shall be used in accordance with the terms of that certification. Employees shall annually be fit tested to this SCBA. Employees can use SCBA's other than ones provided by Maine Fire Training & Education. Employees shall be fit tested annually to any SCBA that they will use.

### **Hazard Evaluation:**

The Program Administrator shall conduct hazard evaluations for each operation, process, work area, or job function to determine when respiratory hazards may

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occur and to make recommendations for policy changes regarding the use of SCBA. The hazard identification will include:

- (1) Identification and development of a list of hazardous operations where respiratory hazards may be encountered.
- (2) Review of work processes to determine where potential exposures to respiratory hazards may occur. Surveying the workplace, reviewing the operations, and talking with employees and supervisors shall be conducted for this review.
- (3) Exposure monitoring to ensure the proper use of SCBA.

The results of the current hazard evaluation are as follows:

## **Structural Firefighter training:**

For years structural firefighting has been known to pose a potential respiratory hazard. This hazard has only increased with the amount of plastics and synthetic material used in construction and home furnishings. Ventilation, even the use of positive pressure ventilation cannot ensure a diminished respiratory hazard.

Therefore, all Employees engaged in interior structural firefighter training shall use SCBA from the point where the I.C. and/or Safety Officer determines the environment to be IDLH until overhaul is complete and the fire is determined to be out by the I.C. Employees who are performing exterior functions at structural fire training may be required to use SCBA, depending on the operation and potential hazard as determined by the I.C. and/or Safety Officer.

## **Non-structural firefighter training:**

Vehicle fires are known to produce toxic gases that may be IDLH. Employees who are engaged in vehicle firefighter training operations who may be exposed to the products of combustion shall use SCBA while performing these operations.

Dumpster or other containers (which are not classified as structure fires) when involved in fire may present respiratory hazards. Employees engaged in these operations that may be exposed to the products of combustion shall use SCBA while performing these operations.

Special Rescue Trainings may include Below Grade, Confined Space and other areas where the I.C. and/or Safety Officer cannot ensure the quality of the atmosphere. In these cases employees shall use SCBA. Engineering controls such as ventilation may be used, provided constant monitoring can ensure with certainty the quality of the atmosphere in the rescue training environment.

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Other Respiratory Hazards: Nothing in this policy is intended to restrict the I.C. and/or Safety Officer from requiring employees to use SCBA when he/she suspects a potential respiratory hazard. IC's are encouraged to adequately size-up each situation and to consider the safety of the employee when making decisions regarding SCBA use.

## **Updating the Hazard Assessment:**

The Program Administrator shall revise and update the hazard assessment annually and as needed (i.e. any time through new technology or new processes, any changes occur that may effect the atmosphere in the working environment that may potentially affect employee exposure).

## **Medical Evaluation:**

Employees who are required to wear a SCBA must pass a medical evaluation before being permitted to wear a SCBA on the job. Employees are not permitted to wear a SCBA until a Physician or other License Health Care Professional (PLHCP) has determined that they are medically able to do so. Any employee refusing a medical evaluation will not be allowed to work in an area requiring SCBA use.

A PLHCP will provide the medical evaluation. Medical evaluation procedures are as follows:

The medical evaluation will be conducted using the questionnaire provided in Appendix C of the respiratory protection standard.

To the extent feasible, Maine Fire Training & Education will assist employees who are unable to read the questionnaire (by providing help in reading the questionnaire). When this is not possible, the employee will be sent directly to the PLHCP for medical evaluation.

All affected employees will be given a copy of the medical questionnaire to fill out, along with a stamped and addressed envelope for mailing the questionnaire to the PLHCP. Employees will be permitted to fill out the questionnaire and any and all follow-ups while being compensated.

Follow up medical evaluations will be provided to employees as required by this standard or as required by the PLHCP.

All employees will be granted the opportunity to speak with the PLHCP about their medical evaluation, if they so request.

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After an employee has received clearance and begun to wear a SCBA, additional medical evaluations will be provided under the following circumstances:

- Annually after age 40.

- Every two years between the ages of 35 - 39.

- Every five years up to age 34.

Employee reports signs and/or symptoms related to their ability to use a SCBA, such as shortness of breath, dizziness, chest pains, or wheezing. The PLHCP or supervisor informs the Program Administrator that the employee needs to be reevaluated. Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation. A change occurs in the workplace that may result in an increased physiological burden on the employee.

All examinations, evaluations and questionnaires are to remain confidential between the employee and the PLHCP. The only form that the Program Administrator needs is a recommendation from the PLHCP.

The employee can forward a copy of the recommendation of the PLHCP from another employer to the Program Administrator.

## **Fit Testing:**

Fit Testing is required for all employees wearing a SCBA.

Fit testing will be conducted in accordance with the following schedule;

- Prior to being allowed to wear any SCBA.

- Annually

- When there are changes in the employee's physical condition that could affect respirator fit (obvious changes in body weight, facial scarring, etc.).

Employees will be Fit-Tested with the make, model, and size of the SCBA mask that they will actually use.

If needed, the Program Administrator will arrange for fit testing to be done for the employee. The fit test to be done will be Quantitative, **thru an approved outside agency.**

The employee can forward a copy of the fit testing form whether QLFT or QNFT testing was done from another employer to the Program Administrator.

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## **Respirator Use:**

Before any employee shall be allowed to wear an SCBA, the employee shall be trained in use, cleared by the PLHCP to wear the SCBA, have had a fit test for the make, model, and size of SCBA that will be used.

SCBA use is required for all employees engaged in the following firefighter training activities; Structural Fires, Vehicle Fires, Dumpster Fires, and Special Rescue Situations, or any training that may cause exposure to a respiratory hazard.

Employees are permitted to use SCBA other than ones provided by Maine Fire Training & Education. Such SCBA shall meet all NIOSH requirements, current Maine Law and be properly maintained according to the manufactures recommendations. Employees shall be properly fit tested and have on file documentation for the SCBA they will be wearing.

## **General Use Procedures:**

Employees will use their respirators 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 is not certified by NIOSH or by its manufacturer.

All employees shall conduct 'User Seal Checks' each time that they wear their respirator. Employees shall use either positive or negative pressure check (depending on which test works best for them) specified in Appendix B-1 of the Respiratory Protection Standard.

Employees who detect operational problems with or experience failure of the SCBA while in an IDLH area shall immediately sound their PASS Alarm and leave the hazardous environment with their partner and/or all firefighter students under their control and notify the I.C. of such.

Employees are not permitted to wear any jewelry, ear protection, eyeglasses, or protective hoods in a manner that may interfere with the face-to-face piece seal. Facial hair or any other hairstyle may not interfere with the face-to-face piece seal.

## **Interior Structural Firefighter Training:**

### **Training Facilities:**

Employees engaged in Interior Structural Firefighter Training at training facilities shall use SCBA for all fires beyond the Incipient Stage, while using any type of "smoke pot" or as directed by the I.C. and continue to use SCBA until the

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completion of Overhaul and building is completely ventilated. Work in a minimum of pairs and maintain voice or visual contact with members of each team. Be supported by two (2) stand-by employees who are available for immediate rescue of interior firefighter students and/or employees. Each standby 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 the accountability of the employees and fire fighting students inside the building.

## **Acquired Structure:**

Employees engaged in Interior Structural Firefighter Training at Acquired Structures shall use SCBA for all fires beyond the Incipient Stage, while using any type of "smoke pot" or as directed by the I.C. and continue to use SCBA until the completion of Overhaul and building is completely ventilated. Work in a minimum of pairs and maintain voice or visual contact with members of each team. Be supported by four (4) stand-by employees who are available for immediate rescue of interior firefighter students and/or employees. Each standby 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 the accountability of the employees and fire fighting students inside the building.

## **Use other than Interior Structural Fire fighting:**

For training requiring SCBA use other than that of Interior Structural Fire Fighting, employees shall use SCBA whenever they may be exposed to environments that may become IDLH or a respiratory hazard, or as directed by the I.C.

When the I.C. cannot ensure the employees ability to escape from the hazardous environment, one employee shall be stationed at the point of entry. Standby employee shall be dressed in full protective clothing and have SCBA immediately available to them, to maintain accountability and be readily available to perform immediate rescue.

## **Air Quality:**

SCBA cylinders shall be filled with Grade D (or better) compressed air only. The Program Administrator shall ensure that compressed air used maintains Grade D (or better) Quality. Documentation from each fill site used will be provided and maintained by the Program Administrator.

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## Cleaning, Maintenance, and Storage:

### Cleaning:

SCBA are to be cleaned and disinfected after each use. The cleaning policy to be as follows:

Disassemble SCBA, removing cylinder, mask, speaking amp.

Preferred method of cleaning is to use the Scott Multi-wash solution.

#### **Second method:**

Wash the face piece and associated parts in a mild detergent with warm water.

Disinfect the face piece in a diluted bleach solution, rinse completely in clean warm water.

Wash the frame and harness assembly in mild detergent with warm water, rinse completely in clean warm water.

Wash & rinse the regulator assembly in warm water, then disinfect with a diluted bleach solution, giving a final warm water rinse.

Allow complete unit to air dry.

Reassemble the SCBA using a full bottle (90% or greater), test the function and document on the "after use form".

Field cleaning of SCBA is to be done using 70 % Isopropyl Alcohol wipes. There will be no sharing of SCBA masks in the field without proper field cleaning.

The Program Administrator will ensure an adequate supply of cleaning and disinfecting material is available, as well as field cleaning material. If supplies are low, employees should notify their supervisor who will in turn notify the Program Administrator.

### Maintenance:

SCBA are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee. 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. The manufacturer or their designee will conduct repairs beyond the scope of our trained repair personnel.

The following items are to be checked, after each use and monthly. The findings of these checks are to be properly recorded in the SCBA Maintenance Log;

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Face piece;

- Cracks, tears or holes
- Facemask distortion
- Cracked, loose, damaged lens

Head straps;

- Breaks or tears
- Broken buckles

Valves;

- Residue or dirt
- Damage to valve or valve material

Gauges, Regulators & Air Lines;

- Damage to or inaccuracy
- Leaks

PASS Alarm;

- Operation
- Battery condition

Body Harness;

- Tears, rips, fraying or otherwise damaged straps
- Broken buckles

Cylinder;

- Air supply full (90% or greater)
- Hydrostatic test date
- General cylinder condition

SCBA that are defective or that have defective parts shall be taken out of service immediately. If during an inspection or during use, an employee discovers 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 an irreparable condition.

When a respirator is taken out of service, it will be appropriately tagged indicating the problems, the Program Administrator will be notified so arrangements can be made for repairs and SCBA will not be used until repairs are made.

## **Storage:**

Storage of SCBA shall be in the black bags. Masks shall be stored in black mask bags that are provided to prevent exposure to dirt and/or contaminants.

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## Training:

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 the SCBA.

- Use in emergency situations

- 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.

- General requirements of the Respiratory Protection Standard.

## Program Evaluation:

The Program Administrator shall annually and as needed, evaluate the respiratory protection program to ensure:

- Current written programs are being effective and properly implemented.

- Employees are properly using SCBA.

- The program continues to be effective.

## Record Keeping:

The Program Administrator shall keep and maintain all documentation in the areas of:

- Medical Evaluations (PLHCP recommendation only)

- Fit Testing

- Training

- Inspection records

- Air Quality Documentation

Effective Date of this policy shall be January 1, 2004.

Next scheduled evaluation of this policy shall be January 1, ~~2007~~ 2008.

**All additions to this Policy will be BOLD, Italicized and Underlined.**

**Any subtractions to this Policy will have a single strike though.**

**These additions or subtractions will stay in this format until the next revision, at which time the added language will be placed in normal print and the subtracted language will be permanently deleted.**