

# SOUTH PORTLAND FIRE DEPARTMENT

## STANDARD OPERATING GUIDELINES

<b>Policy #:</b>	5.223	<b>Effective Date:</b>	1/28/2008
<b>Title:</b>	Respiratory Standard	<b># of pages:</b>	8
<b>Category:</b>	Personnel	<b>Classification:</b>	Yellow

1. **PURPOSE:** The South Portland Fire Department is well aware that in the performance of our duties we may be exposed to **respiratory hazards** during any operation. These hazards include but are not limited to smoke, heat, toxic gases (known and unknown), plus O2 deficiency. In most cases, these hazards present work environments that are an **Immediately Dangerous to Life and Health (IDLH)**.

The use of **Self-Contained Breathing Apparatus (SCBA)** shall be the first line of defense. Air quality monitoring shall also be used to be absolutely certain that the hazard no longer exists.

2. **POLICY:**

### **Scope and Application:**

This program applies to all employees who are required to wear SCBA during fire fighting or other emergency activities.

### **Responsibilities:**

#### **Fire Chief**

The Fire Chief shall have the overall administrative responsibility of the “South Portland Fire Department Respiratory Standard” including;

- 1.) Development of the “Respiratory Standard”.
- 2.) Development of policies, rules and regulations.
- 3.) Appointment of “Respiratory Standard” program administrator.

#### **Program Administrator**

The Program Administrator is responsible for the following duties;

- 1.) Identifying work areas, processes or tasks that require workers to wear SCBA or respirators and evaluating hazards.
- 2.) Monitoring respirator use to ensure proper usage of the type of unit per manufacturer’s operational instructions.
- 3.) Arranging for and/or conducting training.
- 4.) Conducting qualitative fit testing with “Bitrex” or a similar agent
- 5.) Administering the Medical surveillance program
- 6.) Maintain records required by the program.
- 7.) Updating the written program, annually and as necessary.
- 8.) Will ensure an adequate supply of cleaning and disinfecting material is on hand to maintain all respiratory masks (SCBA) on a day to day and post emergency use basis.

9) Maintain a TYPE I GRADE A quality of compressed air consistent with 29 CFR 1910.134.

Provide to the current "Health Care Provider"\* the necessary information about the standard including a copy of the South Portland Fire Department program. A copy of the Respiratory Protection Standard (29 CFR 1910.134). A list of hazards encountered in the work environments, and for each employee requiring evaluation; his/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 Training Deputy has been designated The Respiratory Protection Program Administrator for the South Portland Fire Department. One other Line Officer and the EMS Coordinator will assist him.

### **Supervisors;**

Supervisors are responsible for ensuring that the respiratory protection program is implemented and maintains implementation while keeping up with any modification of the program. 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 include the following;

- 1.) Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing, and medical evaluations prior to the donning of any SCBA at any IDLH incident requiring the use of same, including live fire training.
- 2.) Ensuring the availability of SCBA
- 3.) Being aware of tasks requiring the use of SCBA
- 4.) Enforcing the proper use of SCBA when necessary.
- 5.) Ensuring that SCBA are properly cleaned, maintained, and stored according to the respiratory protection standard.
- 6.) Ensuring that SCBA fit properly and do not cause discomfort.
- 7.) Continually monitor work areas and operations to identify respiratory hazards.
- 8.) Report to the Program Administrator or Fire Chief should an employee under their supervision have difficulty when using a SCBA.
- 9.) Coordinate with the Program Administrator how to address respiratory hazards or other concerns of this program.

South Portland Fire Department Supervisors include; Deputy Chiefs, Captains, Lieutenants, Senior Men (when in charge), Safety Officers, and Call Officers.

### **Employees:**

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

Also to care for, maintain, and store their SCBA as per Department protocol.

Inform their supervisor if the SCBA no longer fits well or should they have difficulty when wearing or using it.

Inform their supervisor or Program Administrator of any immediate respiratory hazards that they feel is not adequately addressed in the workplace.

### **Program Elements**

#### **Fit Testing:**

The South Portland Fire Department has only one brand of SCBA (SCOTT). Scotts are NIOSH certified and shall only be used in accordance with the terms of that certificate. All employees that need to use a SCBA, no matter what the length of time, shall be annually fit tested.

#### **Hazard Evaluation:**

The Program Administrator shall conduct hazard evaluations for all operations to determine when respiratory hazards may occur and to make recommendations for policy changes regarding the use of SCBA

- (1) List hazardous operations where respiratory hazards may be encountered.
- (2) Determine where potential exposures to respiratory hazards may occur, by surveying the workplace, reviewing operations, and talking with Employees.
- (3) Monitor exposure to identify the necessity of SCBA.

### **Results of Hazard Evaluation**

**Structural Firefighting:** It goes without question that a potential respiratory hazard exists while fighting fires in and around buildings. This has only increased with the advent of more plastic and synthetic materials being used in construction and home furnishings. Even with the use of positive pressure ventilation (PPV), it cannot be ensured that a respiratory hazard does not exist. Therefore all personnel of the South Portland Fire Department engaged in interior fire attack shall use SCBA until such time as overhaul is completed and an IDLH atmosphere no longer exists. Personnel engaged in exterior fire ground duties may be required to use SCBA when conditions warrant, depending on the operation and potential hazard encountered or as determined by the OIC, Safety Officer, or Company Officer.

**Vehicle Fires:** Known to produce toxic gases that may be IDLH, Firefighters engaged in vehicle firefighting shall use SCBA while performing these operations.

**Dumpster / Container Fires:** SCBA shall be used when operating at this type of fire due to the potential of toxic or respiratory hazards that may exist.

**Hazardous Material (Haz-Mat) Incidents:** Due to the inherent danger of Haz-Mat incidents, SCBA shall be used whenever a firefighter is working in the Hot Zone, Warm

Zone, or assigned to De-contamination duties and when the O.I.C. determines a necessity exists.

**Weapons of Mass Destruction (WMD) incidents:** Due to the inherent danger of WMD incidents, SCBA shall be used whenever a firefighter is initially working in the Hot Zone, Warm Zone, or De-contamination and when the O.I.C. determines a necessity exists. After evaluation of the agent, Command may specify a lower level of respiratory protection.

**Abnormal Rescue Situations:** SCBA required at Rescue calls that may involve Confined Space, Below Grade, or any other situation that the atmosphere cannot be confirmed as having an O2 level at or above 19.5%.

**Other Respiratory Hazards:** Nothing in this policy is intended to restrict the O.I.C. from requiring the use of SCBA when he/she suspects a potential respiratory hazard exists.

**Periodic Program Evaluation:** The Program Administrator shall revise and update this Standard annually and as needed throughout the year. (i.e. anytime new technology, new processes, or standards are made available that may effect the working environment (atmosphere) or has the potential to affect the employee's exposure to a hazardous respiratory environment.

**Medical Evaluations:**

Personnel required to wear SCBA must pass a medical evaluation before being allowed to use one on the job. Without medical clearance from a physician the employee will not be permitted to use a SCBA.

A Licensed physician at the chosen medical facility, by the City of South Portland, for any given year, will provide the Medical evaluation. (Note: The Employee's own Physician may be consulted for this evaluation provided that said Physician complies with the guidelines as set by this Standard.)

The chosen physician (Or personal Physician) will use the attached questionnaire (attachment #1).

All Employees will be given a copy of the medical questionnaire to fill out while on duty.

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

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

After an employee has been cleared to wear a SCBA, additional medical evaluations will be provided under the following circumstances;

- 1.) Employee reports signs and / or symptoms such as shortness of breath, dizziness, chest pains, or wheezing while using a SCBA.
- 2.) The physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
- 3.) 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 physician.

### **Fit Testing**

Fit testing is required for **all** employees wearing SCBA.

Fit testing will be conducted as follows;

- 1.) Prior to being allowed to use any SCBA.
- 2.) Annually
- 3.) When there are changes in the employee's physical condition that could affect respiratory fit (obvious changes in body weight, facial scarring, etc.)

Employees will be fit tested with the make, model, and size of the SCBA they will actually use.

The Program Administrator (Training Deputy) or his / her designated assistant will conduct fit tests as outlined in 29 CFR 1910.134.

### **Respirator Use**

Employees engaged at the following fireground operations are required to use SCBA; Structure Fires, Vehicle Fires, Dumpster Fires, and at any "Special Rescue Situation" as well as Haz-Mat Incidents or at any incident where there is a chance of an exposure to a respiratory hazard.

### **General Use Procedures**

Employees will use SCBA whenever conditions specified by this program exists and in accordance with the training received on the use of each particular SCBA. The SCBA shall not be used in a manner for which it is not certified by NIOSH or in a manner that is prohibited by the manufacturer.

All employees shall conduct a "User Seal Test" each time they don a SCBA. This test shall be either a positive or a negative pressure check (whichever works best for the individual) as specified in Appendix B-1 of 29 CFR 1910.134 Respiratory Protection Standard.

Whenever an employee experiences or detects an operational problem or failure of their SCBA, he/she shall immediately notify their supervisor, sound their PASS alarm, and leave the IDLH atmosphere with their partner.

Jewelry, eyeglasses, ear protection, or protective hoods that may interfere with the face to facepiece seal shall not be permitted. Hair styles or facial hair shall not interfere with the face to facepiece seal.

### **Interior Structural Firefighting (Two-in / Two-out)**

1. SCBAs are required for IDLH atmospheres. (Interior attack at any structure fire is always IDLH.) A minimum of two firefighters must enter the structure and remain in visual and voice contact at all times. (two-in)
2. Two firefighters must be on standby for immediate rescue of the interior team. Each member assigned to the standby team shall be dressed in full protective gear including SCBA. The standby team can not be assigned to any other duty. (Two-out)
3. Nothing in this section is meant to preclude firefighters from performing “Emergency Rescue” activities before the entire team (Two-in / Two-out) has assembled. The following conditions apply and must be followed;
  - a.) Notify Dispatch of entry without the Two-out team.
  - b.) Enter with or without a charged hoseline, effect a rescue, and immediately exit the IDLH atmosphere.
  - c.) After the incident, the O.I.C. shall submit to the Fire Chief a written report detailing the reason(s) for deviation from this policy.

### **Use Other Than Interior Firefighting**

SCBA usage is mandatory at any incident that the firefighter may be exposed to or where the atmosphere might change to IDLH and/or a respiratory hazard may exist.

### **Air Quality**

SCBA cylinders shall be filled with Grade “D” compressed air only. The Program Administrator or Air Maintenance Officer shall ensure that the compressed air maintains Grade “D” quality at all times and that air compressors are serviced and tested at least annually.

### **Cleaning;**

SCBA shall be cleaned and disinfected after each use as per Departmental Policy.

### **Maintenance;**

SCBA are to be properly maintained at all times in order to ensure that they function properly and protect the employee. Maintenance involves a through visual inspection for fullness, cleanliness, and defects daily. Anytime the level on the gauge on the cylinder drops at or below 4000 lbs. that cylinder shall be removed and refilled to 4500 lbs. or until full. Worn or defective parts will be replaced prior to returning SCBA to service. All defective SCBAs will be referred to the Air Maintenance Officer for repairs or adjustments as needed. Any repair that exceeds the capability of the Air Maintenance Officer shall be completed only by the Manufacturer or at his designated repair facility.

SCBA are to be checked weekly by moving air through the regulator, checking the low air alarm, and the appropriate form filled out and returned to the Air Maintenance Officer. If during the weekly inspection or at any time that a SCBA is found to have a defect, the employee shall immediately notify his/her supervisor. Supervisor will notify Program Administrator or Air Maintenance Officer. The Program Administrator or the Air Maintenance Officer will decide to either remove the SCBA from service until repairs can be made or perform a simple repair if feasible.

**Storage;**

SCBA units shall be stored in their designated place on the apparatus free from dust, dirt grease ect.

**Training:**

Training shall be administered annually and when the following situations occur:

- 1) Changes in the hazards members may be exposed to, or changes in the respirator used by the department.
- 2) Inadequacies in the member's knowledge or use of the respirator indicate the member has not retained the understanding or skill.
- 3) Any situations that arises which appears retraining may be necessary to ensure the safety of the members.

The respiratory protection training shall provide members with annual training in the following:

- 1) Safely donning and doffing
- 2) Uses and limitations
- 3) Consequences of improper fit or poor maintenance
- 4) Seal checks
- 5) Recognizing medical signs and symptoms that can impact respirator use.
- 6) Inspection of the respirator
- 7) Maintenance and storage
- 8) Member limitations
- 9) Decontamination and disposal procedures

Instruction on the common breakdowns that could cause injury should include:

- 1) Abuse and misuse of equipment
- 2) Physiological and psychological factors
- 3) Unapproved equipment
- 4) Buddy breathing
- 5) Accident data collected

**Program Evaluation:**

The program administrator shall annually and as necessary evaluate this Standard to ensure that;

- 1) The program is effective and properly implemented
- 2) The employees are using SCBA properly

- 3) The program is updated as new standards come into effect

**Record Keeping:**

The program administrator, or his designee, shall keep and maintain all documentation in the areas of;

- 1) Medical Evaluations (physician recommendation only)
- 2) Fit Testing
- 3) Training

Reviewed	07-19-01
Reviewed	06-24-02
Reviewed	07-14-03
Reviewed	07-03-04
Reviewed	03-04-05
Revised	01-23-08
Revised	09-10-12
Reviewed	12-14-13
Reviewed	02-10-15

3. REFERENCES:

- None

By Order Of:

*Kevin W Guimond*

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Fire Chief