Title: Respiratory Protection Standard

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Standard Number: 600-03 Supersedes Date: 05/18/2006

1.0 Purpose:
The intent of this standard operating guideline is to address the requirements of the Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134 regulation, Respiratory Protection and Maryland Occupational Safety and Health (MOSH).

Included in this regulation is the requirement that an employer develops and implement a written respiratory protection program, with required worksite-specific procedures and elements for required respirator use. The WCVFRA has established this standard operating guideline to comply with the OSHA/MOSH requirements and its member organizations and personnel shall comply with the requirements within.

Each agency may develop and adopt more stringent requirements. Any omissions or errors in this guideline shall not relieve each member department or their representatives from compliance with the requirements of 29 CFR 1910.134 and other applicable regulations or standards.

2.0 Definitions:
The definitions for this document are those outlined in OSHA 29 CFR 1910.134(b) and are provided in Attachment A. WCVFRA and its member agencies are considered the employer and all personnel are considered employees.

3.0 Program Requirements:
The OSHA/MOSH requirements for a respiratory protection program includes the following:

- Procedures for the selection of respirators in the workplace
- Medical evaluation of employees required to use respirators
- Fit testing procedures for tight-fitting respirators
- Procedures for the proper use of respirators in routine and reasonably foreseeable emergency situations
- Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators
- Procedures to ensure adequate air quality, quantity and flow of breathing air for atmosphere-supplying respirators
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- Training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations
- Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use and their maintenance
- Procedures for regularly evaluating the effectiveness of the program.

4.0 Program Sections:

4.1 Program Administration
The WCVFRA and Washington County Department of Emergency Services shall designate a suitably trained program administrator to administer this respiratory protection program. This program administrator shall coordinate with each member department to appoint an assistant to assist with program administration for their department. The program administrator and assistants shall identify and make any necessary adjustments based upon the evaluation and periodic review of the program.

4.2 Procedures for Respirator Selection
All personnel involved in structural firefighting and rescue operations shall utilize NIOSH/MSHA approved SCBA with minimum service duration of 30 minutes (excluding specialized escape packs). These units shall be pressure demand only. Note: The downgrading to a level of respiratory protection below that stated above shall only be allowed when the Incident Commander has determined through the use of air monitoring that the decreased level of protection will not result in personnel being exposed to hazardous atmospheric conditions. (29CFR1910.120).

The SCBA shall be equipped with an Emergency Breathing Support System (EBSS), or “Buddy Breather” connection. All existing SCBA must be retrofitted to provide this connection.

All SCBA shall be equipped with an integrated personal alert safety system (PASS).
4.3 Medical Evaluation

Because of the physiological requirements for personnel who will be utilizing respiratory protection, a medical evaluation to determine the ability of personnel to use this equipment is required. Each user must complete this requirement prior to the use of respiratory equipment, including respirator fit testing and training evolutions.

The medical evaluation procedures shall include a medical questionnaire as required in 29CFR1910.134 in Sections 1 and 2, Part A of Appendix C. (See Attachment B) The information shall be reviewed by a physician or licensed health care professional and determination if a follow-up medical examination is necessary. The follow-up examination shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination. The user shall have an opportunity to discuss the questionnaire and the examination results with the PHLC.

The WCVFRA has designated Health @ Work as its PHLC to evaluate personnel. Each company may utilize this service, or designate its own PHLC. The medical evaluation is provided at no cost to the user. The PHLC shall be provided with the following information to make a recommendation concerning a user's ability to use a respirator:

1. A copy of the WCVFRA respiratory plan or department's plan
   a. The type and weight of the respirator to be used;
   b. The duration and frequency of respirator use (including use for rescue and escape);
   c. The expected physical work effort;
   d. Additional protective clothing and equipment to be worn
   e. Temperature and humidity extremes that may be encountered.
The department shall obtain a written recommendation from the PHLCP regarding the employee’s ability to use the respirator as required in 29CFR1910.134 (e) (6). The recommendation shall provide only the following information:

1. Any limitations on respirator use related to the medical condition of the user, or relating to the conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
2. The need, if any, for follow-up medical evaluations; and
3. A statement that the PHLCP has provided the user with a copy of the PHLCP’s written recommendation.

Additional medical evaluations may be required if:
1. The PHLCP recommends it;
2. The user reports signs or symptoms related to the ability to use the respirator;
3. The program administrator or chief of the department determines a need to have the user reevaluated;
4. Observations made during fit testing and program evaluation which indicates a need for employee reevaluation;
5. Changes in the department’s SOPs, SOGs or equipment that would substantially increase the physiological burden placed on the user.

All medical screening and evaluations shall be conducted confidentially and the medical records shall be maintained in compliance with 29CFR1910.1020, “Access to Employee Exposure and Medical Records.”

4.4 **Fit Testing Procedures**
Personnel shall be fit tested prior to initial use of the respirator and at least annually thereafter. The user shall be fit tested with the same make, model, style, and size of respirator that will be used. Prior to fit testing, the user’s ability to wear respiratory protection shall have been evaluated by the PHLCP within the appropriate schedule. The user shall be instructed in the proper methods and procedures for donning and doffing the respirator face piece. The fit testing procedures shall be conducted in accordance with the respirator manufacturer’s recommendation and shall be conducted as outlined in
29CFR1910.134 Appendix A. (Attachment C) The only testing recognized for WCVFRA will be quantitative testing and a fit factor of at least 1000 must be obtained for approval of a face piece for the user.

The appropriate documentation of the completed fit test shall be kept on file in the user's training file. An additional fit test shall be conducted whenever the user reports to the department, PLHCP, supervisor or program administrator make visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. Recruit training conducted at training academies and similar locations, where trainees may be assigned an SCBA for general familiarization training, may be conducted before the trainee has been fit tested. This provision is based on the assumption that each person has had a medical evaluation meeting the requirements outlined herein. Training prior to fit testing may not include entry into any hazardous atmospheres, but training evolutions with SCBA without hazardous atmospheric conditions may be conducted, such as following hose lines with obstructed vision, maze evolutions, and other activities. Prior to any training involving any fire or interior structural firefighting evolutions, the recruit must have completed the fit test protocol.

4.5 **Operational Procedures**

It is the policy of the WCVFRA that all personnel expected or likely to respond to and function in areas of a known or potential IDLH atmosphere are equipped with and trained in the proper use and maintenance of SCBA or other respiratory equipment provided by the department.

All users of respiratory protection shall comply with 29CFR1910.134 (g) (1), Face piece seal protection. Users shall not be permitted to use respirators if they have:

1. Facial hair that comes between the sealing surface of the face piece and the face or that interferes with the valve function; or
2. Any condition that interferes with the face-to-face piece seal or valve function.

If an employee wears corrective glasses, they cannot protrude through the seal area. If corrective vision is necessary, the department shall provide the user with
the corrective vision equipment available from the manufacturer of the respiratory protection.

The department is responsible to ensure user compliance with the face piece seal requirements above. If a user is not in compliance, they shall not be permitted to utilize respiratory protection or enter into known or potential IDLH environments. Each department is responsible to ensure their users are trained in the proper use of the respiratory equipment provided, including user face piece seal checks, cleaning and user inspection and maintenance procedures. The department is also responsible to ensure that personnel are fit tested in accordance with the requirements of 29CFR1910.134.

Each department shall ensure that users are trained to check for an acceptable face piece seal each time they wear the face piece. The face piece seal shall be performed in accordance with the respirator manufacturer’s recommendations. All users shall utilize an atmosphere-supplying respirator (SCBA or SAR) during the following emergency situations:

1. Incidents within a structure or confined space above or below ground level
2. Operations within a contaminated or potentially contaminated atmosphere
3. Situations where the atmosphere is unknown.

While working in an IDLH atmosphere, a minimum of two users shall work as a team and maintain visual, voice, or signal line communication with each other and with personnel outside the IDLH atmosphere. (Note: Radio or other electronic means do not meet this requirement.) 29CFR1910.134 (q) (3)

Procedures for interior structural firefighting include the above requirement, with at least two users entering the IDLH atmosphere and remaining in visual or voice contact with each other at all times. There shall also be at least two users outside the IDLH atmosphere that are equipped and ready to provide assistance and rescue to the users within the IDLH area. All users engaged in interior structural firefighting shall use SCBAs. One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident. The other individual located
outside the hazardous area must remain in constant communication with the crew operating inside the hazardous environment. If the interior team requires rescue or other emergency assistance, the outside team shall notify the incident commander and other personnel operating at the scene and Washington County Fire & Rescue Communications of the situation.

Each department shall integrate the WCVFRA personnel accountability system into their operations that require the use of respiratory equipment. The OSHA regulation notes that nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled. Although the regulation requires that initial attack operations must have adequate personnel present at the emergency scene for initial interior fire attack, it allows for deviation from this requirement in the event that a known rescue situation exists, where immediate action is necessary to prevent the loss of life. As soon as the rescue situation has been completed, compliance with the requirement for the two-in/two-out is necessary.

All users shall resist the tendency to remove the respiratory protection during routine fire or rescue situations. The potential for a respiratory hazard may exist in routine as well as extraordinary fire and rescue situations. It should be noted that there are many toxic gases produced in structure fires in addition to carbon monoxide, and they are still present in hazardous levels during overhaul operations. Therefore, respiratory protection should continue to be utilized during this process until the atmosphere has been assessed with monitoring equipment and the incident commander determines it is no longer necessary.

4.6 Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators

4.6.1 Cleaning of Respirators
Respirator face pieces shall be cleaned and disinfected in accordance with the manufacturer’s recommendations after each use. SCBA components shall be cleaned to remove dirt, chemicals, and other foreign matter after each use according to the manufacturer’s recommendations.
The department shall provide the user with the appropriate cleaning and disinfectant agents as necessary to comply with the manufacturer’s recommended procedures for the respiratory equipment used.

4.6.2 Inspection and Maintenance of Respirators
All respirators shall be inspected for wear and deterioration of components before and after each use, and on a weekly basis between uses. Special attention should be given to rubber parts which can deteriorate. The face piece, face seal area, headband, valves and regulator devices must be in good condition.

All respirators shall be flow tested on annual basis or after repair.
All compressed air cylinders shall be tested and maintained as prescribed in the Shipping Container Regulations of DOT 49CFR part 1880.
All SCBA regulators shall be annually flow tested in accordance with NFPA 1404, Chapter 6, 2013 edition. Any defective or worn part must be reported to a company officer and the program administrator for immediate evaluation and repair or replacement if necessary.

4.6.3 Retirement of Respirators
The program administrator and/or the chief of the department shall retire a respirator that is defective and not suitable for repair. All components of a retired respirator shall be clearly marked “Not acceptable for use” using a permanent paint marker.

4.7 Procedures to Ensure Air Quality
The Chief of the Washington County Emergency Air Unit shall be responsible to ensure its equipment meets or exceeds the air quality standards for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification G7.1-1989.

4.8 Training of employees
All users must be trained in the proper use of the respiratory equipment being utilized, their physical limitations and limitations of the equipment. Training shall be conducted on an annual basis and appropriate documentation of the training shall be on file in the user’s training records.
User training shall include, but is not necessarily limited to:
1. Why using a respirator is important
2. How a poorly fitting respirator compromises user protection
3. How a poorly maintained respirator compromises user protection
4. How using a respirator in a manner or environment that it is not designed or approved for compromises protection
5. What the limitations and capabilities are of the respirators being used or will be used
6. How to operate the respirator in emergency situations, including when a respirator malfunction occurs
7. Proper respirator inspection procedures
8. Methods to don and doff the respirator
9. Methods for the user to check the face piece seal of the respirator
10. Departmental procedures for cleaning, disinfecting, inspecting, maintenance, and storage of respiratory equipment
11. Medical signs and symptoms that a user may experience that could limit or prevent the proper use being made of the respirator
12. The general requirements and revisions of the OSHA regulation 29CFR1910.134

4.9 Program Review and Evaluation
The designated program administrator and each department shall periodically review and update this program as necessary to maintain compliance with the appropriate regulations, standards and equipment technology. Revisions of this program shall be submitted to the WCVFRA Standards Committee.

4.10 Record Keeping
Each department shall develop and implement standard operating guidelines consistent with this program and maintain the appropriate level of documentation to demonstrate compliance.

Each department shall be responsible to maintain accurate records for their respective members. Users that volunteer or serve in a career capacity in different departments shall ensure each department has their records.