



Respiratory Protection Program

ENVIRONMENTAL HEALTH & SAFETY



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RESPIRATORY PROTECTION PROGRAM

A. INTRODUCTION

1. The purpose of the program is to improve the level of protection provided to employees who use respirators to protect themselves from respiratory hazards. Respirators will be used in situations where engineering and administrative controls cannot be feasibly implemented and in some cases where an employee chooses to use a respirator even when one is not required. This written program will ensure that the University is in compliance with Oregon Occupational Safety and Health Administration (OR-OSHA) rule 1910.134 for employee respiratory protection.

B. SCOPE

1. This University of Oregon (UO) respiratory protection program is established for all faculty and staff with the risk of occupational exposure to respiratory hazards. This written program is available to any employee upon request. The use of dust masks are not regulated under this program.

C. RESPONSIBILITIES

1. **Department – Chair/Director**- Work unit directors are responsible for carrying out the respiratory protection program according to this written program. As chief Department representative, they are responsible for assuring that funding is available to pay for respirators and associated equipment, fit testing and any required medical examination. Departments shall not issue respiratory protection equipment, but may stock replacement parts. All equipment and cartridges are supplied through EHS. Costs will be recharged to the employee's department or paid directly by the student.
2. **Environmental Health & Safety (EHS)** – EHS is responsible for serving as the Respiratory Protection Program administrator. As part of that responsibility, EHS will conduct workplace analysis when appropriate, conduct occasional workplace inspections to ensure program compliance, provide or arrange for training that meets the needs for the specific respirators issued and consult with the University Health Center on issues involving specific workplace hazards or employees. EHS personnel have the authority to halt any operation at the UO where there is a likelihood of personal injury from respiratory hazards. EHS will supply all equipment and cartridges; costs will be recharged to the employee's department or paid directly by the student.
3. **Supervisor** – The supervisor is responsible for implementing the program requirements described in this written program. They must assist EHS with the identification of employees that must be enrolled in this program. Supervisors will also work with EHS to ensure that all of their employees are trained and receive an appropriate medical evaluation, as outlined in this program, and consult with EHS on new applications that may need further evaluation to determine if a respiratory hazard exists.
4. **Employee** – The employee is responsible to use the information they learn from the



training they receive. Employees are responsible for the daily inspection of their equipment, for notifying the appropriate personnel when cartridges or other components of their respirator must be replaced, and notifying their supervisor or EHS if they experience any difficulty in using their respirator. Employees are responsible for cleaning their own respirator and storing the respirator consistent with the training they received.

5. **University Health Center (UHC)** – UHC, as the Physician or other Licensed Health Care Professional (PLHCP), will be responsible for reviewing the medical history of potential respirator users and conducting or arranging for any additional necessary tests. UHC will advise EHS of the approval or denial of medical clearance for all potential and current respirator users. UHC will maintain the formal medical records for employees in the occupational health program while providing EHS with information necessary to maintain regulatory required occupational health information.

D. DEFINITIONS

1. **“Air-purifying respirator”** means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
2. **“Atmosphere-supplying respirator”** means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators and self-contained breathing apparatus (SCBA) units.
3. **“Canister or cartridge”** means a container with a filter, sorbent, or catalyst, or a combination of these items, which removes specific contaminants from the air passed through the container.
4. **“Dust mask”** means a disposable mask that is not rated as a respirator by the manufacturers.
5. **“Employee exposure”** means exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.
6. **“Immediately dangerous to life or health (IDLH)”** 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.
7. **“Physician or Other Licensed Health Care Professional (PLHCP)”** means an individual whose legally permitted scope of practice (i.e., license, registration or certification) allows him or her to independently provide or be delegated the responsibility to provide, some or all of the health care services required by the regulatory authority.
8. **“Qualitative fit test”** means a pass or fail fit test to assess the adequacy of respirator fit that relies on the individual’s response to the test agent.
9. **“Quantitative fit test”** means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
10. **“Service life”** means the period of time that a respirator, filter or sorbent or other respiratory equipment provides adequate protection to the wearer.
11. **“User seal check”** means an action conducted by the respirator user to determine if the



respirator is properly seated to the face.

E. RESPIRATOR SELECTION PROCESS

1. Before a UO employee can obtain a respirator, EHS may conduct a workplace analysis. The analysis may consist of reviewing Safety Data Sheets for hazardous constituents and examining operations that produce air contaminants. EHS may take and analyze air samples to determine the actual air contaminant concentrations. If the contaminant concentration exceeds the threshold limit value, EHS will examine available methods to protect the respirator user.
2. Once it is determined that a respirator is either required or desired by an employee, only National Institute for Occupational Safety and Health certified respirators will be issued. A variety of respirators will be available for employees to try to find the most comfortable equipment. Respirators and cartridges will be assigned to individuals, not to a department, section shop, or group.
3. In the event that the atmosphere cannot be identified or reasonably estimated, a supplied-air or Self Contained Breathing Apparatus (SCBA) will be provided. In the case of the SCBA, a minimum service life of 30 minutes will be provided. For a supplied-air respirator, an auxiliary self-contained air supply will be provided.
4. For an air-purifying respirator used for protection against gases and vapors, where reliable technology exists, cartridges equipped with end-of-service-life indicators will be used. When that technology does not reliably exist, an estimate of the lifetime of the cartridges for the specific work environment will be made and the cartridges will be changed upon an established schedule. That schedule will vary for each worker and will be based upon the following:
 - a. The product(s) the worker uses.
 - b. The hazards of that product.
 - c. Historical information from the worker, based upon past similar work environments.
 - d. Any available air monitoring data.
5. For air-purifying respirators used for protection against particulate (except for particulate at least 2 micrometers in size and situations used for comfort only), a high efficiency particulate air filter or atmosphere-supplying respirator will be used. Dust masks shall not be used to achieve compliance with air contaminants.

F. MEDICAL EVALUATION

1. UHC staff will serve as the PLHCP for the University. In situations where the UHC cannot perform necessary services, those services will be contracted out through the UHC. Questionnaires and exams will be conducted during employee work hours. Information



gained by the PLHCP will remain confidential. During training, a medical questionnaire will be filled out and sent to PLHCP for review. PLHCP will advise EHS whether an employee can or cannot wear a respirator. The PLHCP may order an additional evaluation prior to making their decision on whether the employee will be approved to wear a respirator.

2. Additional medical consultation will be provided when any one of the following conditions exists:
 - a. An employee reports medical signs or symptoms that are related to ability to use a respirator.
 - b. The PLHCP, supervisor or respirator program administrator determines that an employee needs to be reevaluated.
 - c. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation.
 - d. A change occurs in workplace conditions that may result in substantial increase in the physiological burden placed on an employee.

G. FIT TESTING PROCEDURE

After the medical approval has been received, and general training performed, a fit test must be performed. That test will be conducted with the same make, model, style and size of respirator that the employee will use.

For air purifying respirators to be used in environments that do not require a fit factor greater than 100 a qualitative fit test will be performed using [Appendix A](#) of OR-OSHA 1910.134 as the protocol for that test.

For work environments that require a fit factor greater than 100, a quantitative fit test must be conducted.

Fit testing will be conducted prior to any issuance of a respirator and, at least, annually thereafter. Additional fit testing will be conducted whenever an employee, supervisor, PLHCP, or program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, and are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

H. PROPER USE OF RESPIRATORS

Respirators will not be used when facial hair comes between the sealing surface of the face piece and the face, or that interferes with valve function. When any other condition exists that interferes with the tight seal of the face piece, the employee will be instructed to leave the work environment until the situation can be resolved.

Other conditions, such as corrective glasses, goggles or other personal protective equipment, will be evaluated by the employee and their supervisor to ensure that the proper face seal is maintained. If the seal cannot be maintained, alternate equipment or work will be considered.

All respirator users will perform a user seal check each time they don the respirator. Seal check procedures will be explained and reviewed to the employees during training per [Appendix B1](#) of OR-OSHA 1910.134.



The appropriateness of the respirator will be evaluated when the work environment changes. If this change should occur during the work shift, the employee will be instructed to leave the area until an evaluation can be conducted. Employees will be instructed to leave the work area if they detect a vapor or gas breakthrough, change in breathing resistance or leakage of the face piece.

Employees will be instructed to leave the work area any time they need to change their cartridges or replace any piece of their respirator. Employees will wait until they are out of the air-contaminated environment prior to removing their respirator.

Anticipated atmospheres where IDLH environments may be encountered are: confined space entry rescues (see Confined Space Entry Program), work in exhaust lines where the nature of the material in the exhaust system cannot be determined or chemical spill response. Under those situations, the following will be implemented:

- A minimum of one employee will be located outside the IDLH atmosphere.
- Visual, voice or signal line communication will be maintained between the watch employee and the entry employee. Such communication systems will be established prior to the entry.
- Watch employees will be trained and provided the necessary equipment to extradiate the employee.
- The watch employee notifies and establishes an alternate watch employee prior to entering the IDLH space.

I. MAINTENANCE AND CARE OF RESPIRATORS

Employees will be issued respirator cleaning procedures as outlined in OR-OSHA

1910.134 ([Appendix B-2](#)). SCBA face pieces will be cleaned and disinfected after each use.

Respirators used in fit testing and training shall be cleaned and disinfected after each use.

Respirators will be stored in such a manner as to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, damaging chemicals and other physical damage. SCBA will be stored in the EHS facility to be easily accessible to the EHS staff.

Employees will be required to inspect the respirator they are issued prior to each use and during cleaning. SCBA will be inspected monthly, according to the manufacturer's specifications. Escape only respirators shall be inspected before being carried into the workplace for use. Inspections will include the following items:

- Tightness of connections.
- Function of the respirator.
- Condition of various parts including, head straps, valves, cartridges and face piece.
- A check of elastomeric parts for pliability and signs of deterioration.

For SCBA, a spare air cylinder will be maintained at all times.

Any respirator found in need of repair will be taken out of service until the repairs are made. Replacement parts will be made with like pieces from the same manufacturer. A qualified technician will make repairs on the SCBA.



J. PROCEDURES FOR SCBA AIR

SCBA's used by UO employees for respiratory protection will be maintained by a qualified technician. Compressed breathing air will meet at least the requirements for Type 1-Grade D. Filling of air cylinders will be contracted out to a qualified technician who will comply with OR-OSHA 1910.134.

K. EMPLOYEE TRAINING

Employees will be trained in the routine and emergency use of respirators including and not limited to, donning and doffing their respirator, limitations of their respirator, and maintenance of their respirator. Training will be conducted prior to the first potential exposure and will recur at least annually. In addition to this, if at any time the environment changes and additional training is needed, or if the supervisor, PLHCP, program administrator or the employee determines that the employee needs retraining, the employee will be required to repeat the respirator class immediately.

Employees will demonstrate their knowledge by taking a written examination at the end of the training. In cases when an employee cannot take a written examination, an alternate process to answering the questions on the quiz will be implemented.

Employees not required to wear a respirator by the OR-OSHA standard or by the employer, but choosing to use one for occupational purposes, will be given a copy of OR-OSHA's [Appendix D](#), or may also be required by the supervisor to attend the respiratory protection training class.

L. RECORDKEEPING

Records of the medical evaluations under this program will be maintained by the UHC for 30 years. EHS will maintain records regarding training and fit testing for a minimum of one year. Fit test information will include: The name of the employee, type of fit test performed, the make, model, style and size of the respirator tested, date tested, and the pass or fail results of the qualitative fit test.

EHS will retain a copy of the respirator program.

M. PROGRAM EVALUATION

Annually, this program will be reviewed and updated as necessary.

N. EVALUATION DOCUMENTATION

Original Preparation Date: 1991
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Authorization: Director, Enterprise Risk Management

Contact: Jeremy Chambers, Program Administrator
(541) 346-2865 | jchamber@uoregon.edu