

UNIVERSITY OF SOUTH CAROLINA LANCASTER

RESPIRATORY PROTECTION PROGRAM

I. Purpose

As part of its continuing effort to reduce exposure and risk to University of South Carolina employees, USC Lancaster, through the USC Safety Program Guide, Section C.12, has implemented this Respiratory Protection Program to provide information on all aspects of the use of air purifying respirators. This written program is designed to comply with the requirements of the federal Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard (29 CFR 1910.134).

This program is designed to help reduce employee exposures to excessive levels of dusts, fumes, mists, gases, vapors, and radionuclides. Where feasible, exposures to contaminants will be eliminated or reduced by engineering controls (e.g., general and local ventilation, enclosure and isolation, and substitution). When engineering controls are not capable of reducing exposure to acceptable levels or are not feasible, the use of personal respiratory protective equipment becomes necessary.

The Respiratory Protection Program consists of the following elements:

- A. Identification and Measurement of Hazards
- B. Respirator Selection
- C. Medical Assessment of Employee Health
- D. Fit Testing Procedures
- E. Respirator Inspection and Maintenance
- F. Employee Training
- G. Recordkeeping
- H. Periodic Program Review

The USC Lancaster Safety Director is responsible for implementing this Respiratory Protection Program for USC Lancaster. He serves as the first contact for employees concerned with respiratory protection. In addition, information and support is available through the program manager at the office of Environmental Health and Safety (EHS). For a respiratory protection program to be effective, a cooperative effort between EHS, Occupational Health, and the employee must occur. The responsibilities of each are detailed in Section IX.

II. Identification and Measurements of Hazards

The need for respiratory protection will be evaluated by the University's Industrial Hygienist, at EHS. The industrial hygienist will determine what specific jobs/activities require the use of respiratory equipment and will assist USC Lancaster in placing those affected employees in the Respiratory Protection Program.

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To determine the need for respiratory protection, the hazards must be identified and evaluated. Upon request from USC Lancaster, EHS will review a job/activity in the department. Air monitoring, in accordance with accepted industrial hygiene practices, may be performed to evaluate a work area or a particular activity. Monitoring will help identify those areas or activities which require engineering controls, administrative controls, or, if those are not feasible, respiratory protection.

If it is determined that respiratory protection is not necessary or required under the standard, an employee may use his/her own respirator if the industrial hygienist determines that such respirator use will not in itself create a hazard. The program administrator will provide the employee with Appendix A, *"Information for Employees Using Respirators When Not Required Under the Standard."*

Periodic measurement of the hazards is necessary to ensure that the proper type of respirator is being utilized. If conditions change, the industrial hygienist will be notified so that the need for respiratory protection can be reevaluated.

III. Respirator Selection

Respirator options are selected by EHS. Only respirators certified by the National Institute for Occupational Safety and Health (NIOSH) will be chosen. The selection is based upon the physical and chemical properties of the air contaminant and the concentration level likely to be encountered by the employee.

Only respirators selected by EHS shall be used. Any changes or additions must be approved by EHS. It is the responsibility of USC Lancaster to purchase the appropriate respirators for the department. Replacement parts must be purchased from the original manufacturer for a respirator to maintain its NIOSH approval.

Appendix B provides a list of USC Lancaster employees wearing respirators, an inventory of all respirators owned by USC Lancaster, the reasons (hazards/activities) for each respirator, and the NIOSH certification number for each respirator.

IV. Medical Assessment of Employee Health

Using a respirator may place a physiological burden on employees that can vary with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee.

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After the Industrial Hygienist determines that respiratory protection is necessary, the employee's health must be evaluated by a physician or licensed health care professional at Thompson Student Health Center. The Industrial Hygienist will then submit a "Request for Medical Clearance for Respirator Use" form (Appendix C.1) to Occupational Health. The Occupational Health physician or nurse, through a medical history and a physical, if necessary, will determine if an employee's health allows him or her to wear a respirator.

The results (pass/fail/conditions of use) of the medical evaluation is reported to the USC Lancaster Safety Director, the Industrial Hygienist, and the employee's immediate supervisor via the "Respirator Wearer Report Form" (Appendix C.2)

The frequency of physical examinations will be at the discretion of the Occupational Health physician or nurse.

V. Fit Testing Procedures

Before any employee may be required to use a respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size respirator that will be used. This applies to all tight-fitting respirators, including air purifying and SCBA. The fit-testing form used at the University of South Carolina are attached as Appendix D.

Fit testing will be repeated on an annual basis.

VI. Respirator Inspection and Maintenance

Air purifying respirators should be cleaned by the user with warm water and a mild detergent and, if shared, disinfected with ethyl alcohol after each use. Before donning each time, the respirator should be inspected for cracks, dents or any other signs of wear. They should be stored in a clean, dry place out of direct sunlight and extreme temperatures. Cartridges and filters should be replaced the end of the work shift. HEPA cartridges should be replaced at least annually.

Specific cleaning and inspection procedures are attached as Appendix E.

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VI. Employee Training

No employee will be permitted to work with a respirator until he or she has received training in respiratory protection. The training will be provided by EHS and will cover the following topics:

1. Explanation of the hazard and what would happen if respiratory protection was not used
2. Elements of the Respiratory Protection Program and the employee's responsibility under it
3. Selection of respiratory protection and who is authorized to modify the selection
4. The purpose of the fit test and medical evaluation requirements
5. Function, capabilities, and limitations of the selected respiratory protection
6. Explanation of the operation of the respiratory protection, including how to don, check the fit, and wear the respirator properly
7. Respirator maintenance including cleaning, inspection, and storage
8. Recognition and handling of emergency situations

VII. Recordkeeping

For each employee assigned a respirator, the following records will be maintained in the noted locations:

1. Medical records, including copies of the "Request for Medical Clearance for Respirator Use" and "Respirator Wearer Report" forms and results of any physical examinations by Occupational Health at Thompson Student Center
2. Training records by EHS and the USC Lancaster Safety Director.
3. Fit testing records by EHS and the USC Lancaster Safety Director.

VIII. Periodic Program Review

This program will be reviewed at least annually by the USC Lancaster Safety Director and updated as necessary.

IX. Specific Roles and Responsibilities

USC Lancaster Safety Director

- Recognize potential hazards and contact EHS for evaluation
- Purchase respirators and associated equipment
- Maintain this written program, and review at least annually
- Notify EHS of new individuals requiring respiratory protection
- Spot check respirators periodically
- Maintain records of fit-testing and training

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B. Supervisors

- Recognize potential hazards and notify the USC Lancaster Safety Director or EHS
- Enforce the use of respiratory protection, where necessary

C. Environmental Health and Safety

- Identify and evaluate respiratory hazards
- Select appropriate respiratory protection options
- Conduct initial and periodic training and fit-testing
- Perform periodic reevaluations of exposures
- Maintain records of fit-testing and training
- Audit departmental program periodically

D. Individual Respirator Wearer

- Recognize and report potential hazards to Supervisor
- Use respiratory protection as instructed
- Attend training and fit-testing annually
- Inspect respirator for defects or missing parts
- Clean and store respirator as instructed

E. Occupational Health

- Conduct medical evaluations for respirator users

APPENDIX A

Information for Employees Using Respirators When Not Required Under the Standard

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APPENDIX B

List of Employees Wearing Respirators

Employee Name	Type of Respirator Worn	Reason for Respirator	NIOSH Cert. #

APPENDIX C.1

Request for Medical Clearance for Respirator Use

APPENDIX C.2

Respirator Wearer Report Form

APPENDIX D

Fit-testing Procedures

APPENDIX E

Respirator Cleaning Procedures