



RESPIRATORY PROTECTION PROGRAM

CONTENTS

- 1.0 PURPOSE
 - 2.0 APPLICABILITY AND SCOPE
 - 3.0 APPLICABLE REGULATIONS AND STANDARDS
 - 4.0 DEFINITIONS
 - 5.0 RESPONSIBILITIES
 - 5.1 Employee Responsibilities
 - 5.2 Manager and Supervisor Responsibilities
 - 5.3 Career and Protective Services Responsibilities
 - 6.0 ACCESS TO THE WRITTEN PROGRAM
 - 7.0 TRAINING AND COMMUNICATION
 - 8.0 RECORD KEEPING
- PROGRAM APPROVAL AND REVIEW

- Appendix A [Hazardous Materials Control Measures](#)
- Appendix B [Selection Guide for Air-Purifying Respirators](#)
- Appendix C [Authorization for Respirator Medical Assessment and Health History Questionnaire](#)
- Appendix D [Information Sheet for Elective Respirator Use](#)
- Appendix E [Fit Test Guidelines](#)
- Appendix F [Record of Respirator Fit Test](#)
- Appendix G [List of Department Respirator Users](#)
- Appendix H [Monthly Respirator Inspection Record](#)
- Appendix I [Respirator Cleaning Guidelines](#)
- Appendix J [Respirator Cartridge Change-Out Schedule](#)

1.0 PURPOSE

The purpose of this Program is to protect university personnel from hazardous airborne contaminants, and to meet regulatory requirements regarding respiratory protection. This document provides guidelines for the selection, use and maintenance of respirators throughout the University.

2.0 APPLICABILITY AND SCOPE

This program applies to all university employees whose responsibilities expose them to potentially hazardous airborne contaminants, and includes voluntary and emergency use.

As a first approach, engineering and administrative methods shall be employed to control exposure to air contaminants. When no such methods of worker protection are feasible, respiratory protection will be used to ensure protection.

3.0 APPLICABLE REGULATIONS AND STANDARDS

California: Title 8, General Industry Safety Orders, Section 5144

Title 8, Construction Safety Orders, Section 1531
ANSI Standard: Z 88.2; Standard Practices for Respirator Protection
USC Policy: USC Safety Policy #002: [Respiratory Protection](#).

4.0 DEFINITIONS

Air-purifying Respirator: a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-supplying respirator: a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere; includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Cartridge or canister: a container with a filter, sorbent, or catalyst, or combination of these items, that removes specific contaminants from air passed through the container.

Filtering facepiece (dust mask): a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium; includes those having N95 designation.

Fit Test: use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

5.0 RESPONSIBILITIES

The University shall make available at no cost a medical evaluation, appropriate respirators, training and fit tests to employees whose responsibilities expose them to hazardous airborne contaminants that exceed regulatory limits. Environmental Health and Safety will oversee the administration of the Respiratory Protection Program, but ultimate responsibility for implementation rests with each department.

5.1 Employee Responsibilities

Each employee affected by this program is responsible for:

- Being familiar with this Respiratory Protection Program and the [Respiratory Protection Policy](#);
- Obtaining written medical clearance specifically for respirator use prior to initial use, upon a significant change in job task or medical condition, or as specified in writing by physician (see [Appendix C](#));
- Attending respirator training prior to use and annually (schedule through Professional Development);
- Maintaining a facial surface that provides a proper fit with the respirator (e.g., clean-shaven);
- Obtaining a fit-test for each assigned tight-fitting respirator prior to use and at least annually (schedule through Professional Development);
- Maintaining each assigned respirator in a ready-to-use condition at all times;
- Inspecting each assigned respirator prior to and after each use, and at least monthly. Store written inspection record with the respirator (see [Appendix H](#)) [not applicable for single-use respirators];
- Wearing the assigned respirator during activities that have potential for exposure over regulatory limits;
- Leaving the exposure area in the event of respiratory equipment malfunction, physical or psychological distress, or other unsafe conditions that require relief;
- Immediately notifying a supervisor of any new or changed workplace hazards, or any significant change in medical condition;
- Never performing a job or be present at any location that requires respirator use unless all provisions of this Respiratory Protection Program are observed; and

- Immediately notifying a supervisor of any problem or question about an assigned respirator or its use;

5.2 Manager and Supervisor Responsibilities

Each manager and supervisor affected by this program is responsible implementing this program and ensuring compliance within their department. This responsibility includes:

- Being familiar with this Respiratory Protection Program and the [Respiratory Protection Policy](#);
- Limiting exposure to hazardous materials by engineering out the exposure hazard, or by limiting the time that employees are exposed to the hazard;
Providing Environmental Health and Safety with a list of the hazardous materials, engineering and administrative controls, and personal protective equipment used at the work site (see [Appendix A](#));
- Providing employees exposed to airborne contaminants that exceed regulatory limits with an approved respirator appropriate for work activities that expose them to those contaminants (see [Appendix B](#));
Note: an approved respirator is one that protects against known chemical hazards at the assessed exposure concentration, fits the nature of the application, and has been jointly certified by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA).
- Assuring that each respirator user receives written medical clearance for each type of respirator assigned before using the respirator, upon a significant change in job task or medical condition, or as specified in writing by physician (see [Appendix C](#));
Note: medical clearance is required annually for persons who use a respirator for protection from radioactive materials.
- Providing employees exposed to airborne contaminants that exceed regulatory limits with a respirator that provides an adequate fit (with which the employee can pass a fit-test);
- Ensuring that all employees required to use a tight-fitting respirator both receive respirator training and pass a fit-test before initial use and annually thereafter, or more often if required by regulation for exposure to a particular material;
- Maintaining a current list of all department personnel who use respirators (see [Appendix G](#));
- Making available replacement parts (e.g., filter cartridges, valves) for respirators used in the department;
- Assuring that respirators are clean and disinfected at the time of issuance. Respirators shared by more than one user must be cleaned, disinfected and tagged before being reissued (see [Appendix I](#));
- Providing a convenient, sanitary storage area for respiratory protection equipment and a means to clean and disinfect reusable equipment [not applicable for single-use respirators];
- Establishing and ensuring that employees follow a cartridge change-out schedule (see [Appendix J](#));
- Ensuring that employees use the assigned respirator(s) as instructed;
- Monitoring workplace conditions, employee exposure and physical stress to minimize detrimental conditions;
- Ensuring that atmosphere-supplying respirators are supplied with air of Grade D quality or better;
Note: Grade D quality air has oxygen content of 19.5–23.5%, hydrocarbon content of 5 mg/m³ or less, carbon monoxide (CO) content of 10 ppm or less, carbon dioxide (CO₂) content of 1,000 ppm or less, and a lack of noticeable odor.
- Providing a required information sheet (see [Appendix D](#)) to employees whom the department allows to wear a respirator for comfort reasons only (e.g., in a dusty or smelly environment), but whose exposure level does not require respiratory protection;

Note: a department may permit employees to wear a tight-fitting respirator for comfort only, either self-provided or department-provided, only if the user has written medical clearance for the type of respirator used. Such instances do not require annual training or fit-testing, but the department is responsible for assuring that the respirator is cleaned, stored, maintained and used in a manner that does not create a health hazard.

Note: voluntary use of a filtering face-piece is permitted for comfort reasons, and does not require medical clearance, annual training or fit-testing.

- Notifying Environmental Health and Safety of changes in work practices, chemicals or other hazardous materials, so that a current exposure assessment can be made; and
- Referring to Environmental Health and Safety questions or problems regarding respiratory protection.

5.3 Career and Protective Services Responsibilities

Career and Protective Services is responsible for:

- Assisting departments with identification of job tasks that require respiratory protection;
- Providing assessments of exposure to airborne hazards within the University;
- Assisting employees and supervisors in obtaining medical clearance;
- Assisting departments with selection of respirators and filter cartridges;
- Providing training in the proper use and care of respiratory protection devices;
- Providing respirator fit-testing;
- Maintaining training, fit-test and medical clearance documentation;
- Periodically inspecting work areas that require respiratory protection equipment;
- Periodically monitoring program records including Chemical Inventory, List of Department Respirator Users, Medical Clearance, Cartridge Change-out Schedule, Monthly Respirator Inspection Record, Training Record and Record of Respirator Fit-Test documents; and
- Maintaining this written Respiratory Protection Program.

6.0 ACCESS TO THE WRITTEN PROGRAM

This written Respiratory Protection Program is available to all USC employees and their representatives. Copies of this program are available from EH&S at Stonier Hall 101, (213) 740-6213, and can also be accessed from the EH&S web site at <http://capsnet.usc.edu/EHS/Index.cfm>.

7.0 TRAINING AND COMMUNICATION

Training is required at least annually for all respirator users, and is provided through Professional Development. The following components are included in Respiratory Protection training:

- The nature of the hazards for which respiratory protection is being provided, and consequences that may occur from hazard exposure without adequate protection;
Note: Health hazard guidelines are contained in applicable Material Safety Data Sheets and in the USC Hazardous Materials Management Program.
- What characterizes a respirator, the various types of respirators, and when respirator use is required;
- Selection of appropriate respirators and cartridges;
- Medical clearance requirements and how medical conditions such as pulmonary deficiencies may affect the ability to work with a respirator;
- Respirator capabilities and limitations, and the function and possible malfunction of each part of the

respirator;

- User responsibility to inspect respiratory equipment before and after each use and at least monthly, and to document the inspection [single-use respirators require inspection only prior to use];
- Proper storage, cleaning, sanitizing, inspection, maintenance, and proper fitting and adjustment of the equipment. Emphasis will be on keeping respiratory equipment in a ready-to-use condition at all times;
- How to disassemble, don and doff the assigned respirator, and methods to assure adequate fit and function of the respirator each time it is used;

Note: Each wearer will use her or her assigned respirator, or a respirator of the same make, model and size, during training to disassemble and inspect, and during fit-testing.

- User authority to leave the work area for relief from respirator use in the event of equipment malfunction, physical or psychological distress, or other conditions that require relief; and
- Requirements for voluntary use of a respirator when the exposure level does not require respiratory protection (see [Appendix D](#)).

Note: Voluntary use of a filtering facepiece does not require medical clearance, training or fit testing. Voluntary use of supplied-air or tight-fitting air-purifying respirators, if permitted by the department, requires medical clearance and supervision to assure that the respirator itself does not create a health hazard.

8.0 RECORD KEEPING

Departments having activities or locations that require respirator use will maintain the following documents:

- Hazardous Materials and Control Measures;
- Respirator Cartridge Change-out Schedule; and
- List of Department Respirator Users.

Respirator users will maintain the following document for each reusable respirator under their control:

- Monthly Respirator Inspection Record.

Career and Protective Services will maintain the following documents:

- Assessment of Air Contaminants;
- Authorizations for Respirator Medical Assessment;
- Training records; and
- Records of Respirator Fit-Test.

The medical facility that conducts the medical clearance assessment will maintain the following documents for each potential respirator user:

- Health History Questionnaires, and
- Medical Assessment records.

9.0 PROGRAM APPROVAL AND REVIEW

Date revised:	August 9, 2004	By: J. Bartlett
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